DOCUMENT RESUME

ED 113 445 CE 004 908

TITLE Thematic Resources and Activities for Career Education: CEI Final Report: Vol. III.
INSTITUTION Central Susquehanna Intermediate Unit 16, Lewisburg, Pa.
SPONS AGENCY Pennsylvania Research Coordinating Unit for Vocational Education, Harrisburg.
PUB DATE [74]
NOTE 300p.; For related documents, see CE 004 906-7 and CE 004 909-10

EDRS PRICE MF-$0.76 HC-$14.59 Plus Postage
DESCRIPTORS *Career Education; *Curriculum Guides; Elementary Secondary Education; Inservice Teacher Education; Institutes (Training Programs); Integrated Curriculum; *Learning Activities; Program Development; Simulation; *Teacher Developed Materials; *Unit Plan
IDENTIFIERS *Thematic Resources Activities for Career Education; TRACE

ABSTRACT

The book, Volume Three of a final report, is a collection of teachers' guides to units in career education, written by Pennsylvania teachers during a regional inservice institute in career education. The format used, Thematic Resources and Activities for Career Education (TRACE), incorporates the concerns of the Pennsylvania Career Development Model and one of the 15 USOE career clusters into an academic subject already being taught. The collection contains one or two sample units for most grade levels from kindergarten to grade 12; additional units, indicated as appropriate for a span of two or more grade levels, cover the others. Each unit contains an introduction, a statement of goals and behavioral objectives, the concepts or generalizations to be developed, an outline of subject matter (academic skills, careers related to the thematic unit, specific occupational information, etc.) to be mastered, suggested student learning activities, the author's evaluation of the unit after using it, and a bibliography and resource list. An outline of the curriculum unit used to train educators during the institute is included, and the book concludes with three brief units developed by paraprofessionals: two model community simulations for elementary children, and a guide to using resources for secondary students. (AJ)

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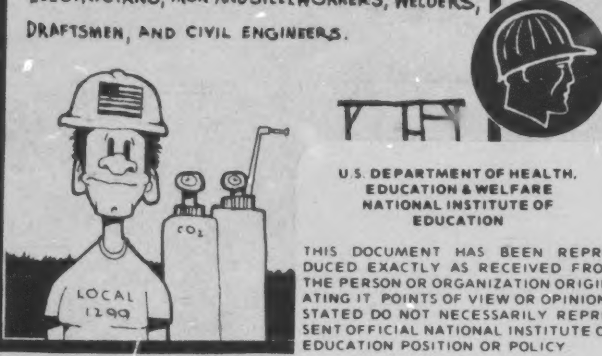

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vol. III
CEI FINAL REPORT
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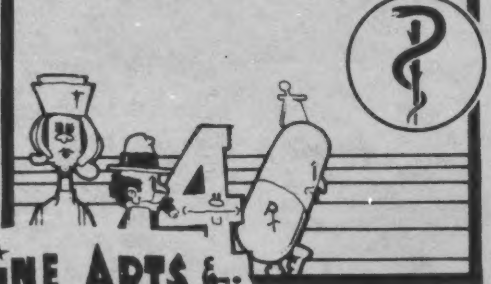

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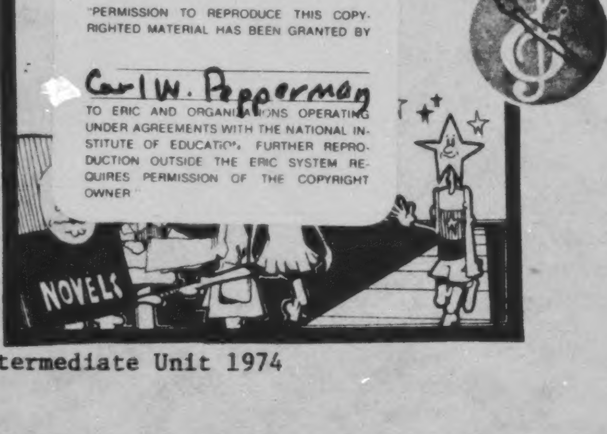

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THEMATIC
RESOURCES
AND
ACTIVITIES
FOR
CAREER
EDUCATION

Compiled by:

Central Susquehanna Intermediate Unit #16

Post Office Box 213

Lewisburg, Penna. 17837

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Preface

A vital component of Career Education is the integration of Career Development Theory and existing curriculum. Successful results of utilizing this approach are exhibited in this booklet.

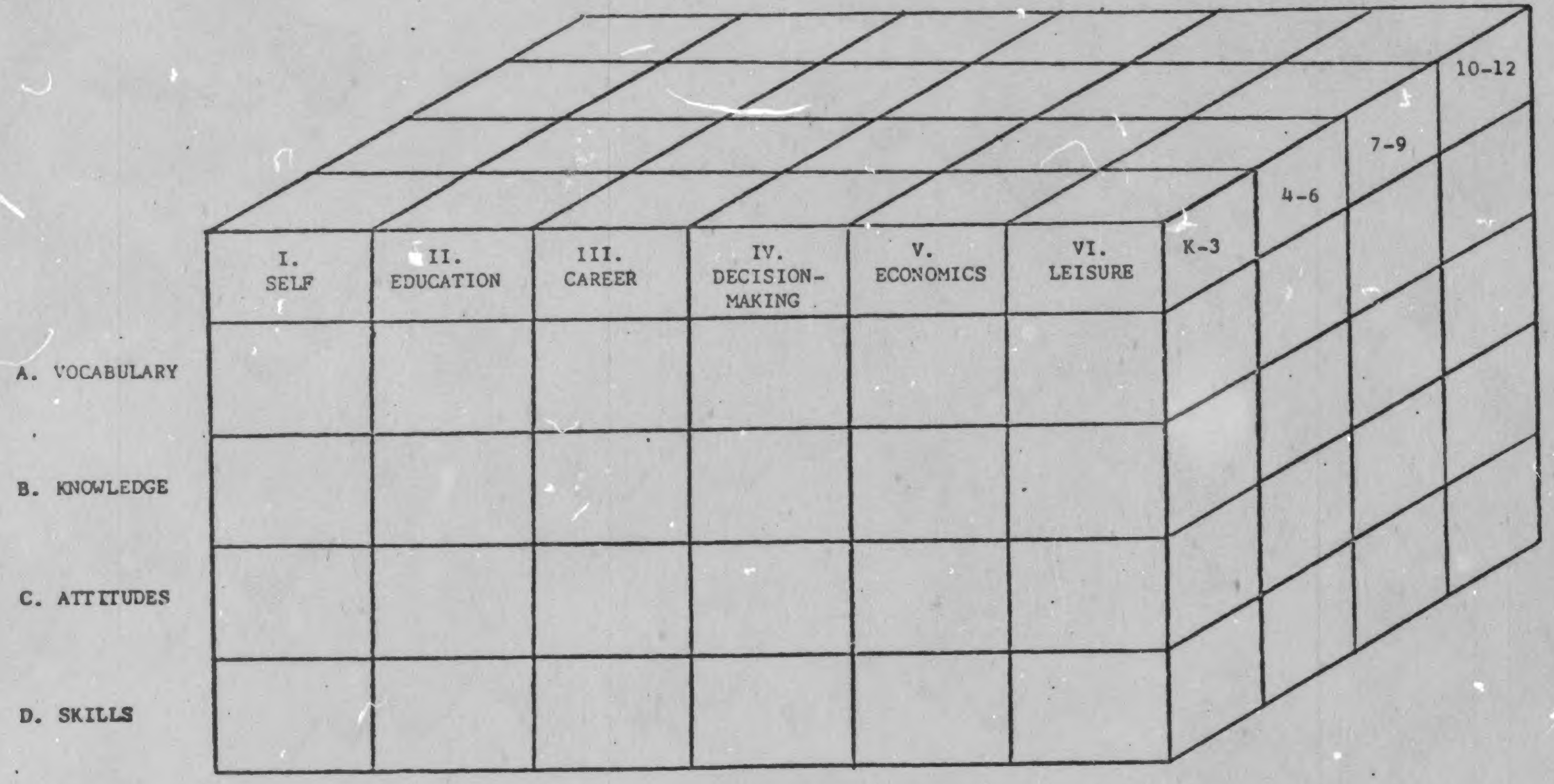
Special acknowledgment is given to Merrill Meehan, Vocational Education Department, the Pennsylvania State University for his leadership in developing the format for and conducting the instruction of the Thematic Resources and Activities for Career Education (TRACE) Unit.

A TRACE unit combines curriculum writing with the concerns of the Pennsylvania Career Development Model and the fifteen career clusters as identified by the United States Office of Education. Specific attention is given to incorporating these concerns into teaching units already being implemented and placing special emphasis on one career cluster.

Each of these units was developed by a member of the Career Education Institute conducted during the 1973-74 school year by the Central Susquehanna Intermediate Unit and funded by the Research Coordinating Unit, Bureau of Vocational and Technical Education, Pennsylvania Department of Education. An evaluation form, completed by the author of the unit follows each TRACE that was implemented during the school year.

These unit examples are not meant to illustrate a comprehensive K-12 Career Education program. They are idea resources from which a total program could emerge. There is much to be learned from successful strategies. Thus, this booklet is provided to assist teachers and counselors in utilizing Career Development Theories.

K-12 CAREER DEVELOPMENT EDUCATION MODEL


I. SELF
II. EDUCATION
III. CAREER
IV. DECISION-MAKING
V. ECONOMICS
VI. LEISURE
K-3
4-6
7-9
10-12
A. VOCABULARY
B. KNOWLEDGE
C. ATTITUDES
D. SKILLS

(Thematic Resources and Activities for Career Education Unit Cover Sheet)

Title: (Careers in Communications)

Level: (Grade 7)

Developed by: Chuck Roast
Bloomsburg Middle School
Bloomsburg, Pa.

Career Education Institute
Central Susquehanna Intermediate Unit
Box 213
Lewisburg, Penna. 17837

INTRODUCTION

I. Objectives
  A. Goals
  B. Behavioral Objectives

II. Concepts and/or Generalizations

III. Subject Matter
  A. Vocabulary Terms to be Defined
  B. Basic Academic Skills to be Developed
  C. Careers Related to the Thematic Unit Grouped by Career Clusters
  D. Other Topics: e.g., specific occupational information

IV. Student Learning Activities
  A. Motivational Activities
  B. Subject Matter Learning Activities
  C. Correlating Activities
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  E. Culminating Activities

Media Component

V. Evaluation
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  B. Teacher Self-Evaluation
  C. Thematic Unit Evaluation

VI. Bibliography and Resource Materials

CAREERS IN ENVIRONMENT;

CLEANING THE CLASSROOM KINDERGARTEN

INTRODUCTION:

The following unit, to be carried out with kindergarten classes in the Millville Area Schools, will involve children in activities related to environmental careers namely, clean-up activities in the classroom. The unit will concentrate on two concerns from the Pennsylvania Career Development Education Syllabus: Helping Children (a) to become more aware of self and (b) to develop their decision making skills. It is intended that children will acquire cognitive skills such as naming cleaning tools, identifying letters in the names of cleaning tools, and associating names of tools with the actual tool. In the affective domain, children will acquire a feeling of satisfaction with their ability to perform clean-up activities and will gain a desire to cooperate with fellow students during classroom clean-up periods. In the psychomotor domain students will learn to manipulate cleaning tools.

In essence, it is hoped that students will become self motivated in clean-up activities, and will be able to decide without specific teacher demands when to engage in cleaning activities.

I. Objectives:

A. Goals:

1. Kindergarten children will be able to perform a variety of clean-up activities.
2. Kindergarten children will be able to distinguish between a neat and messy classroom by teacher standards.
3. Kindergarten children will decide when to clean up their classroom without instructions from their teacher.
4. Kindergarten children will be able to identify their own ability in clean-up activities.
5. Kindergarten children will cooperate with each other during clean-up periods.
6. Kindergarten children will be able to name several objects related to clean-up activities.

B. Behavioral Objectives:

1. Following classroom instruction and activities, Kindergarten children will be proficient in performing five classroom clean-up activities as measured by a teacher-made proficiency checklist for each clean-up activity. 80% proficiency will be expected.
2. Following classroom instruction and activities, kindergarten children will be able to distinguish between a neat and messy classroom according to teacher standards. This ability will be measured by having children assign the terms neat or messy to photographs of their classroom. 80% proficiency will be expected.

3. Following classroom instruction and activities, kindergarten children will be able to decide when their teacher expects them to clean-up the classroom. This will be measured by children volunteering each day to remind the class about clean-up time.

4. Following classroom instruction and activities, kindergarten children will be able to identify their own clean-up abilities as measured by their volunteering to perform four out of five classroom clean-up activities.

5. Following classroom instruction and activities, kindergarten children will cooperate with each other in classroom clean-up activities as indicated by no fighting during five minute clean-up periods.

6. Following classroom instruction and activities, kindergarten children will be able to name several cleaning tools. This ability will be measured by an oral, "name the object," test administered individually by the teacher. 80% accuracy will be expected.

II. Concepts and/or Generalizations:

A. Any career has different levels of responsibility.

B. A worker must understand, not only his job, but also his employers rules, regulations, policies, and procedures.

C. A person's relationships with other people, with his employer, and with society affect his own career as well as the careers of others.

D. A person may be suited for several different careers.

III. Subject Matter:

A. Vocabulary Terms to be Defined

1. Neat

        2. Messy
        3. Clean
        4. Dirty
        5. Waste Basket
        6. Mop
        7. Broom
        8. Trash
        9. Cooperate

    B. Basic Adademic Skills to be Developed:

        1. Recognition of letters of the alphabet.

        2. Word recognition.

        3. Placing objects in an organized arrangement.

        4. Accurately labeling a photograph.

        5. Skillfully manipulating cleaning tools.

        6. Following directions.

    C. Careers Related to the Thematic Unit Grouped by Career Clusters.

        1. Sanitation workers.

        2. Environmental Inspector.

        3. Environmental Engineer.

        4. Other Environmental Occupations.

    D. Other topics: e.g., specific occupation information.

        1. Getting along with fellow workers.

        2. Abiding by job regulations.

        3. Other related topics.

IV. Student Learning Activities:

    A. Motivational Activities

        1. Students will be instructed to mess up the classroom.

        2. Students will view a video-tape of themselves messing up the classroom.

    B. Subject Matter Learning Activities

        1. Students will be instructed in classroom rules for cleanliness.

        2. Students will participate in Magic Circle sessions

(bessell & Parlomares 1970) where they will discuss cues such as "I am able to ...".

3. Students will participate in the puppet and role playing activities of the DUSO program (Dinkmeyer 1970) that focus on the topic of cooperation.
4. Students will view photographs of messy rooms.
5. Students will view a film or filmstrip involving scenes of filthy inner city and rural environments.
6. Students will view a film or filmstrip of clean city and rural environments.
7. Students will view photographs of their own classroom at contrasting states of cleanliness.
8. Students will be instructed in the names of cleaning tools.
9. Students will practice naming various cleaning tools.
10. Students will role play cleaning up their room while fighting.
11. Students will role play cleaning up their room without fighting.
12. Students will role play participation in several clean-up jobs including sweeping the floor, picking up toys, and throwing away trash.

C. Correlating Activities:

1. Students will practice identifying the letters in the names of various cleaning tools.
2. Students will practice pronouncing the names of various cleaning tools and other vocabulary related to cleanliness or neatness.
3. Students will be given a play-clock to practice identifying cleaning time.

D. Individual Study Activities

1. Students will be given block letters of the alphabet and asked to form words related to cleanliness or neatness.

E. Culminating Activities:

1. Students will view a video-tape of themselves successfully cleaning up their classroom. Students will be served cookies during the viewing.

VI. Bibliography and Resource Materials

Bender, R. C. Vocational development in the Elementary School: A Framework for Implementation.

School Counselor, 1973, 21, 109-115.

Bessell, H. and Palomares, U. Methods in Human Development. San Diego: Human Development Training Institute, 1970.

Career Education Resource Guide. General Learning Corporation, 1972.

Dinkmeyer, D. Developing Understanding of Self and Others. Circle Pines, Minn.: American Guidance Services, 1970.

Kehas, C. D. Guidance and the Process of School: Curriculum and Career Education. School Counselor, 1973, 21. 109-115.

INTRODUCTION:

The following unit is designed to be used in a transitional first grade. It will acquaint the children with Alaska. There will be a cursory examination of the physical aspect of the state and its resources. The whole population will be explored with greatest emphasis placed on the study of the Eskimo and his culture. It is intended that children will acquire cognitive skills in knowing Alaska is the 49th state of the U.S.A.; they will be able to recognize the outline of Alaska. They will be able to name careers existing in Alaska. They will learn training and learning necessary for one of the skills such as a worker on the Alaskan pipeline. They will learn about the Eskimo culture, and will be able to name 5 articles used by him in daily living. They will name animals existing in Alaska.

In the affective areas the children will be able to feel that people of different reces have similar likes and dislikes. In the psychomotor scope, the children will dut, draw, and color art forms relative to the Eskimo people. They will draw, color, and cut shapes of the seal, the walrus, the caribou, the whale. They may create a bulletin board with their art form. The Pennsylvania Career Development Guide was the curriculum model for this unit. The concerns of self and career were emphasized and attention was given to awareness of the USOE Cluster Concept.

I. Objectives

A. Goals

1. Children will be aware of the location and physical features of the 49th state of the union.
2. Children will become familiar with the physical features of the Eskimo.
3. Children will be able to know the living habits of the Eskimo on the tundra, and in the communities.
4. Children will explore careers in the bleak northern country.
5. Children will be able to name objects used by the Eskimo.
6. Children will be able to create art reflecting knowledge of Alaska and Eskimo.

B. Behavior Objectives

1. After a visit by a person living in Alaska, children will be able to name 10 occupations of people working in Alaska as well as answer 50% of the oral questions by the teacher about life in Alaska.
2. After showing the filmstrip Call of the Wild, based on story by Jack London, children will be aware of the rugged living climate. This will be measured by an observation in watching recall in play acting.
3. After listening to the record and observing pictures in the SRA - Our Working World series about the Eskimo, children will be able to answer questions relating to the material. The teacher will expect an 80% correct answer result to questions she raises.
4. Following a discussion of the kinds of animals inhabiting Alaska, the children will create a realistic bulletin board.
5. Upon completing and discussion of housing, children will be able to make an igloo. This should be recognizable by observers.
6. After being assigned role-playing involving personal feeling tones, a pair of white children's reaction should be almost identical to a pair of Eskimo children.

II. Concepts and/or Generalizations

- A. It is important to identify and know about Alaska.
- B. It is valuable, with the tremendous world wide interactions of people to be familiar with people of a different culture pattern.
- C. Children should be aware of career opportunities in Alaska.

III. Subject Matter

- A. Vocabulary terms to be defined
    1. Eskimo
    2. igloo
    3. dog sled
    4. trading post
    5. kayak - Eskimo's boat
    6. tundra
    7. mucklocks
    8. parka
    9. Ulu - Eskimo's knife
    10. papoose
    11. Alaskan pipe line
- B. Basic Academic Skills to be developed
    1. Recognition of the location and shape of Alaska.
    2. Knowledge of transportation to get to Alaska.
    3. Awareness of the kinds of people living in Alaska.
    4. Acquisition of knowledge about the varied careers practiced by Alaskans.
    5. Understanding of the culture of the Eskimo
- C. Careers related to Thematic unit grouped by career clusters.

    1. Fine arts

a. artist
b. author
c. anthropologist
2. Construction
a. engineers
b. construction workers
3. Environment
a. naturalists
b. environmentalists
4. Hospitality and Recreation
a. travel agents
5. Transportation
a. airplane pilots

IV. Student learning activities
A. Motivational activities
1. Color and cut out pre primer Eskimo story.
2. Students will view Jack London's Call of the Wild filmstrip.
B. Subject Matter learning activities
1. Children will make ibloos from construction paper or with marshmallows.
2. Children will operate a trading post.
3. Teams will pretend to have dog sled team races.
4. Stories will be created about a family moving to Alaska in order for the father to work on Alaskan pipeline.
5. Read news to read simple words related to the Eskimo.
C. Correlating Activities.
1. Students will learn song and dance presented by music teacher.
2. Students may make puppets or pictures relating to Eskimo's under guidance of art teacher.

D. Individual Student Activities

  1. Students will make objects relating to Alaska and label 5 objects, i.e., shape of state, tundra, Alaskan miners camp.
  2. Students will make and label 3 items important to the Eskimo.
  3. Students will be given block letters of the alphabet and asked to form names of 3 animals living in Alaska.

E. Culminating Activities

  1. Bulletin board made to reflect knowledge gained by the children:
     a. Eskimo igloo with members of family nearby.
     b. Caribou, walrus surrounding a water area.
     c. Lumber camp.
  2. Picture taken of children dressed in parkas, holding igloos made of marshmallows.
  3. After unit learning activities, children will participate in an Eskimo gathering with 90% of them in some role enactment. They will be observed by teacher and interested parents invited to an open house.

Bibliography and Resources:

Books:

Semesh, Lawrence, Our Working World - Chicago: Science Research Association, 1964.

Encyclopedia:

"Alaska", The Golden Book Encyclopedia, Book I 1959, pp. 31,32.

"Eskimo", The Golden Book Encyclopedia, Book IV, 1959, pp. 484,485.

"Seal", The Golden Book Encyclopedia, Book XIII 1959, pp. 1232.

"Whales", The Golden Book Encyclopedia, Book XVI 1959, pp. 1472 - 1473.

"Eskimo", The World Book, E., 1960, pp. 278 - 284.

Supplementary reading

Art activities - Primer - The Eskimo, Continental Press.

Film:

"Paul Bunyan - Lumber Camp Tales" Catalogue of Instructional Films. 1972 - 73 pg. 49. (MP1 - 1984. CSIU #16 - IMC)

Filmstrip:

London,Jack "Call of the Wild" Millville School Library.

DAIRY FARMING AS A CAREER - GRADE ONE

INTRODUCTION:

The students in Homeroom 2 will spend approximately two weeks on the study of the various types of farms that supply our food. This unit will include the study of the various types of jobs that are found in dairy farming and the various products supplied by the dairy industry.

This unit will also include many activities which will help the students gain an understanding of the interdependence of people who work on a dairy farm which produces goods, and those in cities who are dependent on these dairy farms and their goods for their food.

From the Pennsylvania Career Development Education Syllabus this unit will emphasize the educational and career concerns of the children who will study the many careers involved in dairy farming and the marketing and distribution of the goods produced on these dairy farms.

I. Objectives

A. Goals

1. Develop in the students an awareness that there are many people who do various types of jobs on a dairy farm.
2. Help students become aware of the necessary products that are supplied by the dairy industry.

B. Behavioral Objectives

1. Following a trip to a dairy farm and given a teacher-made ditto listing the observed operations and some that were not observed, the students will be able to differentiate those operations they observed from those they did not observe, by printing yes or no after the operation with at least 75% accuracy.
2. Following their field trip, and after viewing films, filmstrips, and prints of the various jobs on a dairy farm, students will make clay models of the workers, machines, and animals they have observed. These models will be realistic enough so that the majority of the class can identify them and to be used in the classroom model of a dairy farm.
3. Given instructions, directions, necessary materials, and job assignments, students will construct a classroom model of a dairy farm. Criteria for evaluation will be the resemblance to the dairy farm visited.
4. Given a teacher-made ditto depicting various types of jobs, each student will - x - off all jobs not found on a dairy farm. Criteria for evaluation will be the students' ability to choose at least 75% of the dairy farm jobs depicted.

5. Children will make a bulletin board display of the various products that are produced on a dairy farm. They will use magazine pictures that they have cut out at home and voluntarily brought to school. Criteria for evaluation will be that students should display at least 75% of the products that were produced on the dairy farm they visited.
6. With 75% accuracy each student will be able to differentiate the products of a Dairy Farm from those of other industries by crossing out all products not produced on a Dairy Farm on a teacher-made ditto of pictures of products of various industries.
7. Students will play a game (Who am I?) in which each child acts out the part of a Dairy Farm worker he saw on our field trip. Afterward the students will take a yes, no test in which the teacher will describe and name various jobs on a Dairy Farm. With 75% accuracy the student will differentiate Dairy Farm jobs from those in other industries.
8. Given a teacher-made ditto of pictures of milk products and non-milk products students will identify accurately 75% of the milk products.
9. Given instruction, directions, a recipe, and ice cream machine, and the proper ingredients, students will measure, mix, and make ice cream as a culminating activity to the extent that the end product is edible.
10. It is hoped that the students will be interested enough in the unit, so that they may voluntarily make, take, and read invitations to the afternoon Kindergarten Class inviting them to see their Dairy Farm model and to share the ice cream they

have made. Response of Kindergarten Class will be criteria for evaluation.

11. After completing the assigned textbook readings, each child will increase his basic mastery of content knowledge as measured by 70% accuracy on a written teacher prepared test.

II. Concepts and/or Generalizations

A. People have many kinds of careers.

B. Every occupation contributes to society.

C. Every individual can have a meaningful and rewarding career.

D. Careers require different knowledge, abilities, and attitudes.

E. Every career requires some special preparation.

F. Dairy farms raise animals and supply products for our society.

G. Milk products are a component of the American diet.

H. A dairy farm is an example of an American life style.

I. Skill in social studies content knowledge is essential for continued academic development.

III. Subject Matter

A. Vocabulary Terms to be Defined

1. Dairy Farm
2. Pasteurize
3. Homogenize
4. Quart
5. Gallon
6. Processing
7. Liquid
8. Container

B. Basic Academic Skills to be Developed

1. Math - Students will use concepts of bigger, smaller, many and few in constructing the Model Dairy Farm. Students will learn liquid measure and fractions and use them in making ice cream.

2. Language Arts - Students will match the animal and Dairy Farm workers models in the Classroom dairy Farm with the proper name tags. Students will use word attack skills learned in reading to decode new vocabulary words introduced in the unit.
3. Art - Students will make a bulletin board display and construct a Model Dairy Farm.
4. Music - Students will learn to sing "In the Barnyard."
5. Science - given prints and pictures of Dairy Farms (from magazines) children will identify the seasons of the year depicted.
6. Social Studies - Students will display their ability to cooperate while constructing the classroom Dairy Farm Model.

C. Careers Related to the Thematic Unit Grouped by Career Clusters

1. Agri-Business and Natural Resources
   a. Veterinarian
   b. Conservationist
   c. Animal Husbandry
   d. Farm advisers
   e. Quality Control workers
   f. Inspectors

2. Consumer and Homemaking
   a. Dietition
   b. Food inspector
   c. Housewife
   d. Cooks
   e. Salesman
   f. Dairy produce manager

3. Marketing and Distribution
   a. Shippers
   b. Truck Driver
   c. Buyers
   d. T. V. announcer
   e. Radio Announcer
   f. Sellers

4. Transportation
   a. Truck Driver
   b. Railroad tank car Manufacturer
   c. Refrigerator Unit Manufacturers
   d. Homogenizing Unit Manufacturers
   e. Pasteurizing Unit Manufacturers
   f. Shipping container Manufacturers

D. Other Topics (Specific Occupational information)

   1. Students will discuss training required for the various occupations in Dairy Farming.
   2. Students will discuss job titles of the various Dairy Farm occupations.
   3. Students will discuss salaries of the various Dairy Farm occupations they studied.

IV. Student Learning Activities

   A. Motivational Activities

      1. Students will make a field trip to a local Dairy Farm to observe the various procedures involved in the production of milk.

   B. Subject Matter Learning Activities

      1. Math

         a. Using the clay animals and models they made, and materials supplied, students will make a dairy farm model using the terms bigger, smaller, many few, more than, and less than in the construction of the mode.
         b. Children will learn liquid measure by filling and emptying (with colored water) 1/2 pint, pint, quart,

1/2 gallon, and gallon containers.

   c. Children will learn fractions of 1/2, 1/4, and 1/3, by putting together geometric shapes cut into these fractions.
   d. Fractions and liquid measure will be used by the children when they make the ice cream.

2. Language Arts
   a. Students will play a game in which they must match each animal model, dairy farm worker, and dairy farm object (barns, fences, etc.) with the proper name tag.
   b. Children will apply word attack skills learned previously to decode the vocabulary words introduced.
   c. Children will use English and spelling skills in the composition of invitations which they will read to the Kindergarten class.
3. Art
   a. Students will make Dairy Farm animals from clay.
   b. Students will make a bulletin board display and will construct a model of a dairy farm for the classroom.
4. Social Studies
   a. Students will cooperate and work in groups following directions and constructing the Dairy Farm Model.
5. Music
   a. Listening to a record and singing along with the teacher, pupils will learn to sing, "In the Barnyard."
6. Science
   a. Given a variety of magazine pictures and prints, students will name the seasons of the year depicted in the picture.

C. Correlating Activities

1. Art - Art teacher will help the pupils in the construction of the Dairy Farm Model. She will also supply needed materials.

2. Music - Music teacher will teach children songs about farms, farm animals, and farm activities.

D. Individual Study Activities.

1. Accelerated students will compose and print a story about the observations they made on our field trip to the Dairy Farm while the slower students will draw pictures to illustrate the story.

2. Slower students will place the pictures of milk products on the bulletin board display while accelerated students will label these pictures.

3. Accelerated students will do research on pasteurization and homogenization and give oral reports to the class.

E. Culminating Activities

Given instruction, directions, a recipe, an ice cream machine, and the proper ingredients, students will measure, mix, and make ice cream. It is hoped that interest in the unit developes enough enthusiasm in the children for them to compose and read an invitation to the Kindergarten class inviting them to share their ice cream.

VI. Bibliography and Resource Materials

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Goodspeed, J.M. Let's Go to the Dairy.

Lenski, Lois, The Little Farm.

Schneider, Nina. Science for Work and Play.

Smith, H. Blecha, M., Pless, H. Science I. River Forest, Ill.; Ladlaw Bros.

Multi-Media

Dairy Farm Video-Tape. Pine Elementary School, Millville, Pa., 1974; 1/2 hour; I.U. #16.

Farm Animals. Encyclopedia Britannica Films, Inc. Wilmetter, Ill., 16mm, 11min.; I.U. #16.

Farm Animals. SVE, Inc., Chicago, Ill., Filmstrip.

Farm Animals. SVE, Inc., Chicago, Ill., Study print.

Farm Babies and Their Mothers. Film Associates of California, Los Angeles, Calif., 16 mm, 11 min., I.U. #16

Learning About Animals. Encyclopedia Britannica, Inc., Wilmette, Ill., filmstrip.

Visiting a Dairy Farm. SVE, Inc. Chicago, Ill., Study print.

V. Evaluation

A. Evaluation of student achievement of stated objectives:
Please indicate yes (Y), no (N), or not applicable (NA) for items.
Be sure to include any pertinent explanations in comments column.

(1) Objectives (B) Behavioral Objective No.	Was it taught?	Was criterion met?	Was criterion realistic?	Is it re-usable?	Was it worth the time?	COMMENTS
1.	Y	Y	Y	Y	Y	Should have made test a little harder; most of class made 100%.
2.	Y	Y	Y	Y	Y	Some slower students were unable to reproduce some of the things they saw and made models of chickens and peeps.
3.	Y	Y	Y	Y	Y	This objective was really fun. Accelerated students even made a stream, trees, fences and really produce a very nice replica of a dairy farm.
4.	Y	Y	Y	Y	Y	All students did well on this objective.
5.	Y	N	Y	Y	NA	Unit was taught around Easter time and Bulletin boards were decorated with Easter decorations. Students made booklets of dairy farm products instead.
6.	Y	Y	Y	Y	Y	Children had no problems with this one.
7.	Y	N	N	Y	Y	Transitional students were unable to differentiate dairy farm jobs from others with 75% accuracy.
8.	Y	Y	Y	Y	Y	No problem here.
9.	N	N	Y	Y	Y	Easter vacation just creeped up on us and we were unable to make ice cream - although we did buy ice cream that Mrs. Javsicas' career ed group made.
10.	N	N	Y	Y	Y	
11.						Children did invite second grade to our classroom to join us in some career ed games and lessons we had.

C. Thematic Unit Evaluation

Give a comprehensive evaluation of the following by specifically indicating strong points, weak points and recommended changes.

(I) Objectives

(A) Goals:

Both goals were met and children did very well in differentiating the various jobs (except transitional students)
All children did well in learning about the various dairy products and their importance.

(II) Concepts:

Most children did well on the concepts because films, filmstrips and prints were used.

(III) Subject matter:

Weakness was that I do not teach subject matter to the children. I teach Social Studies and Science. So when I tried fractions, and liquid measure and word attack skills to some of them they couldn't cope with it.

1. How easily were you able to integrate the Career Education concepts into your curriculum as demonstrated by this unit?

   I was only able to incorporate it into science or social studies.

2. What opportunities did you provide to allow input from your students, colleagues and community? What were the results of these inputs?

   Children were very cooperative in bringing in materials as well as parents.

3. Additional comments:

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Motivational Activity #	Strong Points	Weak Points	Recommended Changes
1	Excellent Motivation children really observed alot and asked really good questions of the guide.	Had to take trip in the morning and disrupted phasing schedule (dairy couldn't take us any other time)	Will try to arrange field trip in the afternoon next year.

Subject Matter Learning Activity	Strong Points	Weak Points	Recommended Changes
1.	Children in accelerated phase and some average phase did well - transitional students did poorly.	Models were too small for slow transitional students to work with.	Have slow students make animals or barns that are bigger than the ones we made.
2.	Accelerated did very well. Some average students did, too.	Slow students just couldn't grasp liquid measure concepts, had no word attack skills and couldn't begin to print an invitation.	Have some other activity for slow students such as putting together jigsaw puzzles that teach liquid measure or puzzles that have pictures only.
3.	Accelerated and average students can do this.	-Too difficult for slow students. Art is taught only once a week and it was difficult to stick to our schedule.	Do my own art work in career ed.
4.	All students worked together nicely.		Worked with the slow students and helped them a lot so they could work in the group.
5.	Taught the songs myself.	Music teacher comes phasing class.	Teach your own songs. I also taught a few games.
6.	All children did well in this activity.		

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Correlating Activity #	Strong Points	Weak Points	Recommended Changes
1.	Worked very closely with art teacher and helped slow student.	Not enough art time and art is held only once a week.	
2.		Music teacher comes during phasing class, not homeroom class.	

DIVIDUAL STUDY

Activity #	Strong Points	Weak Points	Recommended Changes
1.	Each child presented his own story and accelerated students did an excellent job. Average dictated their story in experience sentence. Slow students did a very good job of drawing.		
2.	Slow students made little picture booklets.		
3.	Students were still bringing in materials a month after the unit was done, too.		

ENVIRONMENT AND ME - GRADE TWO

INTRODUCTION:

This is a thematic unit of resources and activities for career education.

This unit uses as its subject matter the natural environment of the state of Pennsylvania. The unit is designed to be used with second grade but could also be used with third grade students. The subject matter could easily be altered for use in any other locality. The unit was developed to be used as part of the daily curriculum over a six-week period of time.

This unit will aid teachers in developing a student's awareness and appreciation of his natural environment. There are also activities to assist a student in developing self-awareness, so that he may define his interests in the areas of work and recreation and thus be preparing himself for the eventual career decision-making process.

This unit develops a specific awareness of careers in the cluster entitled, "Environment." The areas of concern in this unit as outlined in the Pennsylvania Career Development Education model are "self" and "leisure."

I. Objectives:

A. Goals

1. Student will develop a familiarity with and appreciation of plant, animal, and aquatic life in his local natural environment.
2. Student will be aware of his personal interests and his preference in work and play activities.
3. Student will be aware of the world of work in the environmental career area.
4. Student will know the effect of his work and play activities on the natural environment.

B. Behavioral Objectives

1. Given pictures of ten forest animals and ten animal names the student will match them with 80% accuracy.
2. Given pictures of five aquatic animals and five acquatic animal names the student will match them with 80% accuracy.
3. Given pictures of ten trees the student will classify them as either evergreen or leaf-losing with 100% accuracy.
4. Given labeled pictures of ten wild plants the student will classify them as either edible or poisonous with 100% accuracy.
5. Following instruction on how to plant seeds and care for growing plants and given an empty milk carton, dirt, water, and a selection of seeds, each student will prepare the carton, choose and plant several seeds, and care for them through successful germination to maturity.
6. After planting a seed and caring for the plant in the classroom the student will state three needs of plants for healthy growth drawing from his experience.

7. After studying the animals, plants, and trees in his natural environment, the student will voluntarily identify at least one animal, plant, or tree with 100% accuracy while on a guided hike through his natural environment.
8. Following a discussion of work and play activities the student will describe one play activity he enjoys out-of-doors and tell one way in which it affects the natural environment to the satisfaction of the teacher.
9. Following a discussion of work and play activities the student will describe one work activity he enjoys out-of-doors and tell one way in which it affects the natural environment to the satisfaction of the teacher.
10. After contributing to a class scrapbook on leisure activities and following a discussion of how people's leisure activities affect the environment and viewing of visual-aids related to this topic, the student will name three leisure activities that are potentially harmful to the environment and three leisure activities that are potentially helpful to the environment taken from the class scrapbook.
11. After a discussion of careers in environmental cluster the student will on a voluntary basis select a career for which he will draw an illustrative picture for a class bulletin board display.
12. Given a bulletin board display of jobs in the environmental cluster the student will name a minimum of three jobs and two tasks involved in each job.
13. Following activities in environmental careers awareness and self-awareness each student will describe one job that interests

him to the satisfaction of the teacher.

14. Following all activities in this unit the student will voluntarily contribute ideas, materials, energy, and skills to construct a model of a natural environment which has been conserved and a natural environment which has been misused. Each student will choose which model he wants to work on.

15. Given milk cartons, cups, newspapers, magazines, pipe cleaners, cotton, construction paper, yarn, scissors, paste, paint, pebbles, dirt, small plants, toy vehicles, people, animals, and any other materials students have contributed each student will work cooperatively with other students on his team to construct a model of the natural environment. This model will be constructed to the satisfaction of the class.

II. Concepts and/or Generalizations

- A. The natural environment is in a perfect state of balance.
- B. People affect their natural environment and are affected by it.
- C. Every person has individual interests and can find a career which suits his interests.
- D. One person's work is another person's leisure.
- E. To know oneself is the beginning of all knowledge.

III. Subject Matter

- A. Vocabulary Terms to be Defined
  - 1. General
    - a. aquatic
    - b. cooperation
    - c. conservation
    - d. edible
    - e. energy
    - f. environment
    - g. harmful
    - h. helpful
    - i. pollution

        j. recreation
        k. recycle

    2. Forest Life

        a. bear
        b. beaver
        c. chipmunk
        d. deer
        e. game birds
        f. groundhog
        g. oppossum
        h. rabbit
        i. racoon
        j. skunk
        k. snake
        l. songbirds
        m. squirrel

    3. Aquatic Life

        a. bass
        b. bluegill
        c. carp
        d. crayfish
        e. frog
        f. pickerel
        g. pike
        h. salamander
        i. sunfish
        j. trout
        k. turtle

    4. Plant Life

        a. day lily
        b. evergreen
        c. juniper
        d. milkweed
        e. poison ivy
        f. poison oak
        g. poison sumac
        h. poke berry
        i. rose
        j. sassafrass
        k. violet
        l. wild carrot
        m. wintergreen
        n. yew

B. Basic Academic Skills to be Developed

    1. Communication skills with peers and adults

    2. Language development skills

    3. Skills for self-analysis

4. Discrimination skills
5. Observation skills
6. Decision-making skills
7. Analysis and classification skills

C. Careers Realted to the Thematic Unit Grouped by Career Clusters

1. Agri-Business
    a. Firester Logger
    b. Sawer
    c. Miner
2. Business
    a. Secretarial jobs
    b. Executive Jobs
3. Communications
    a. Newspaper and Manazine editors
    b. Journalists
    c. T.V. and Radio Weathermen
4. Construction
    a. Dam Builders
    b. Power plant builders
    c. Builder of park facilities
5. Personal Service
    a. Dieticians
    b. Herbalists
6. Management
    a. Botanist
    b. Naturalist
    c. Forest Ranger
    d. Game Warden

    e. Horticulturist
    f. Janitor
    g. Recycling supervisor
    h. Waterways supervisor
    i. Greenhouse supervisor
7. Fine Arts
    a. Artist
    b. Geologist
    c. Meteorologist
    d. Anthropologist
    e. Architect
    f. Designer
8. Health
    a. Pharmacist
    b. Homeopathic Physician
    c. Chemist
9. Recreation
    a. Camp Counselor
    b. State and National Park Manager
    c. Lifeguard
10. Public Service
    a. Teacher
    b. Government Inspector
    c. Politician

IV. Student Learning Activities

A. Motivational Activities

1. Using magazines, students will select pictures of plant, animal, and aquatic life in their local natural environment

for a bulletin board display.

2. Students and teacher and any interested parents will hike through the woods and discuss observations. These observations can be recorded in experience story format upon return. (This hike could be continued on a regular basis i.e. monthly, throughout the year thus allowing observation of changes in natural environment.)
3. Teacher will bring in samples of edible wild plants for an afternoon snack. (Suggestions: mint, rose, violet, wild carrot, etc.) Or children could accompany teacher on a guided walk to gather these plants.
4. As a group activity students will select one person in each of the following areas to visit the class and discuss their job and conservation of the natural environment:
    a. Animal life - game warden, forest ranger, game farm operator, state or national park manager.
    b. Aquatic Life - game warden, waterways patrolman, fish hatchery operator.
    c. Plant Life - forest ranger, greenhouse supervisor, tree farmer, urban planner, landscape architect, naturalist.
5. Using magazines students will select pictures of recreational activities which they enjoy and paste these pictures in a class scrapbook "Ways we Play". These leisure activites will then be discussed in regard to their affects on the natural environment.

B. Subject Matter Learning Activities

1. The students will view as many audio visual aids as possible on wild animals, trees, plants, and aquatic life indigenous to the local area. (See part VI. Resource Materials for suggestions.)

2. Using the bulletin board display on plant, animal, and aquatic life, the class will discuss distinguishing characteristics of each item pictured.

3. Following a film or similar instructional presentation on trees, each student will bring a leaf from a leaf-losing tree or a sprig of needles from an evergreen tree into the classroom for display and discussion,

4. After studying plant growth and care each student will plant a seed and care for the growing plant in the classroom. Students should use "recycled" milk cartons or similar material for planters.

5. After presentation by teacher, botanist, or naturalist on edible and poisonous plants each student will draw and label a picture of one edible plant and one poisonous plant.

6. Given a coloring book or coloring sheets of forest animals the class will discuss possible correct colors to use and then color them acoordingly.

7. The students will view as many video-tapes or other audio-visual aids as are available on environmental occupations.

C. Correlating Activities

1. Each student will select a magazine picture of a person most like himself and tell the class the likenesses and differences between himself and the picture. (Not restricted to physical) Class may add comments.

2. The students will discuss hobbies and each student will write several sentences about "My Hobby" accompanied with an illustration.

3. a. Each student will draw a picture of three interests or

activities that he enjoys doing as "recreation."

   b. Each student will draw a picture of three interests or activities that he enjoys doing as "work."

   c. Each student will pantomine one of his favorite work or play activities for the class to guess. The class should also guess whether this activity is work or play for the child.

4. Following litterbug film or instructional presentation, discuss litterbugs in relation to pollution. As a class take a walk around the school grounds (or larger area, circumstances permitting) and collect all litter.

5. Following Smoky the Bear film or visit by Smoky to the class, discuss forest life and forest fire destruction and prevention.

6. After a discussion of leisure activities each student will place a circle with his name on a chart which represents leisure activities on a horizontal scale from reading indoors on one end of the spectrum to riding in a snowmobile on the other end. Each student will state the reasons for his personal preference on the scale.

7. Each student will make a notebook entitled "Environment and Me". The pages can be written individually or as a group experience story, depending on the ability of the students. Following are suggested titles for content pages:

   a. My Favorite Forest Animals.
   b. My Favorite Plant to Eat.
   c. My Friend from the Stream.
   d. Things I Like to Play Outside.
   e. Work I like to do Outside.

f. Ways I Take Care of My Environment.

Each page should be accompanied with an illustration.

D. Individual Study Activities

1. For accelerated students: Let students voluntarily select an environmental career job in the classroom for one week. The following are suggestions:
   a. Janitor - Daily trash removal in classroom
   b. Gardener - Daily plant care in classroom
   c. Geologist - Display and label rock specimens
   d. Weatherman - Daily report on outside temperature and weather conditions
   e. Inspector - (for pollution and conservation of energy) Keep thermostat down, lights off when not necessary, etc.
   f. Writer - (to develop environmental materials) Write and display reports on anything happening in class that helps or harms environment.
   g. Artist - (To develop environmental materials) Create and display posters.
   h. Game Warden - Daily animal care in classroom.
2. Each student will report to the class about his job, his report should include answers to the following questions:
   a. What did I do in my job?
   b. What did I like about my job?
   c. What did I dislike about my job?
   d. How did I help the environment?
3. (For remendial students) Using the list of vocabulary terms, each student will draw a picture to illustrate a minimum

of 3 terms in each group: general; forest creatures; aquatic creatures; trees and plants.

E. Culminating Activities:

1. Accompanied by the teacher and interested parents the class will take a guided hike through a nature preserve or through local fields and forest. Students should be encouraged to identify as much flora and fauna as possible.
2. Class discussion of jobs in environmental cluster with "brainstorming" to make a list of jobs on the blackboard. From this list the student will select on a voluntary basis a career for which he will draw and label an illustration for a class bulletin board display entitled "Environment Helpers."
3. The class will construct two models of their natural environment. One model will be "Environment We Helped" and the other will be "Environment We Harmed." Each student will voluntarily choose which model he will work on. Students should be encouraged to "recycle" as much material as possible in constructing the model, e.g. milk cartons, icecream containers, newspapers for paper mache', etc. Students should also be encouraged to place appropriate figures of people in these models. The models can be displayed for the whole school.

VI. Bibliography and Resource Materials

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Herbs and Other Mediciaal Plants. Institute Geografico DeAgostini, Novara, 1968, New York: Crescent Books Div. of Crown Pub. Inc.

Peterson, Roger Tory. Field Guide to Birds Boston: Houghton Mifflin Co., 1947.

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Peterson, Roger Tory. Field Guide to Wild Flowers, Boston: Houghton Hifflin Co., 1968.

Magazines

Field and Stream

National Geographic

National Wildlife

Natural History

Pennsylvania Angler

Pennsylvania Game News

Ranger Rick

Sports Afield

Films

Adventures of Willie Skunk. 1951. B/W, 11 min., I. U. #16.

Animal Homes. 1955. Color, 11 min., I. U. #16

Animals are Different and Alike. 1955, Color, 11 min; I. U. #16.

Bear Trouble. 1964, Color, 11 min. I. U. #16.

Chipmunk and His Bird Friends. 1953, Color, 10 min. I. U. #16.

Conservation for Beginners. 1968, Color, 11 Min. I. U. #16.

Life in a National Forest, Part 6. Color, 11 Min. I. U. #16.

Litterbug. Color, 8 min., I. U. #16.

Smokey and his Friends. Color, 3 min., I. U. #16.

Spotty, The Story of a Fawn. 1950, Color, 10 Min. I. U. #16.

Smokey's Story. Color, 16 Min., I. U. #16.

Squeak the Squirrel. 1951. Color, 11 min. I. U. #16.

Tad the Frog. 1965. Color, 11 Min. I. U. #16.

The Tree. 1964. Color 10 Min. I. U. #16.

Tuffy the Turtle. 1965, Color, 11 Min. I. U. #16.

Two Little Raccoons. 1951. B/w, 11 Min. I. U. #16.

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Multi-Media

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Career Education Resource Guide, General Learning Corp., 1972. Intermediate Unit #16, Lewisburg, Pennsylvania.

Cluster Resource Guide - Environment, Intermediate Unit #16. Lewisburg, Penna., 1973; I. U. #16.

Common Trees of Penna. Dept. of Forest and Waters, Harrisburg, Pa., 1965.

Dillon's Greehhouses video tape. Bloomsburg Elementary Schools, Bloomsburg, Pa. 1974; I. U. #16.

Happiness Is. Pine Elementary School, Millville, Pa., 1974; 8mm., color, I. U. #16.

Pennsylvania Career Development Education Model. I. U. #16.

Popeye Comic book - Environment. I. U. #16, Lewisburg, Pa.

Story of a Logger. Pine Elementary School, Millville, Pa., 1974; 36m. Slides, color; I. U. #16

V. Evaluation

A. Evaluation of student achievement of stated objectives:
Please indicate yes (Y), no (N), or not applicable (NA) for items.
Be sure to include any pertinent explanations in comments column.

(1) Objectives (B) Behavioral Objective No.	Was it taught?	Was criterion met?	Was criterion realistic?	Is it re-usable?	Was it worth the time?	COMMENTS
1.	Yes	Yes	Yes	Yes	Yes	
2.	Yes	Yes	Yes	Yes	Yes	Especially good if some of the animals can be brought into the classroom, such as salamanders, turtles, tadpoles, etc.
3.	Yes	No	No	Yes	Yes	Criterion should be 80% accuracy rather than 100%.
4.	Yes	No	No	Yes	Yes	Criterion should be 80% accuracy rather than 100%.
5.	Yes	Yes	Yes	Yes	Yes	Great - lettuce and nasturtiums worked well in milk cartons and grew quickly.
6.	Yes	Yes	Yes	Yes	Yes	
7.	Yes	Yes	Yes	Yes	Yes	A beautiful place for the hike is the PP&L Montour Nature Preserve.
8.	Yes	Yes	Yes	Yes	Yes	
9.	Yes	Yes	Yes	Yes	Yes	
10.	No					The making of the scrapbook and B.O.'s #8, 9, 14, 15 seem to cover this pretty well.
11.	Yes	Yes	Yes	Yes	Yes	The Environmental Career job briefs available from CSIU #16 were very helpful as motivators.
12.	Yes	Yes	Yes	Yes	Yes	
13.	Yes	Yes	Yes	Yes	Yes	This can be easily combined with #12.
14.	Yes	Yes	Yes	Yes	Yes	The kids really loved this
15.	Yes	Yes	Yes	Yes	Yes	and this.

C. Thematic Unit Evaluation

Give a comprehensive evaluation of the following by specifically indicating strong points, weak points and recommended changes.

(I) Objectives

(A) Goals:

I feel all goals were fulfilled by the completion of the unit.

(II) Concepts:

Concepts worked well for second grade and could easily be adapted for older or younger children.

(III) Subject matter:

Tangible experience with the subject matter was what allowed the greatest learning to take place.

1. How easily were you able to integrate the Career Education concepts into your curriculum as demonstrated by this unit?

Very easily, as second grade science deals with the subject matter, and many of the activities were great for reading and writing skill development.

2. What opportunities did you provide to allow input from your students, colleagues and community? What were the results of these inputs?

Students brought in animals and plants to show the class--other teachers knew what we were doing and gave help in the form of showing interest and sharing ideas. The next time I would like to send an initial letter to parents, inviting them to share their experiences or jobs that are environment related.

3. Additional comments:

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Motivational Activity #	Strong Points	Weak Points	Recommended Changes
1.	High interest	Many duplicate pictures	Be sure to have a good supply of environment related magazines.
2.	High interest among students & parents	None	Strongly recommend doing the same hiking trail on a monthly basis to observe changes.
3.	High interest	Most readily available wild plants are ripe in the summer--spring is the best in-school season.	
4.		Difficult to get in touch with some people.	
5.	High interest		

Subject Matter Learning Activity	Strong Points	Weak Points	Recommended Changes
1.	CSIU #16 film catalogue has a great variety to choose from		
2.	High interest		Also read library books about the different animals--many are available. Students can do library research and then report to the class.
3.	High interest	Leaves should be preserved.	Have students press leaves. In the classroom iron the leaves or needles between wax paper and use for bulletin board display.
4.	High interest		Remind students to water their plants well for weekends.

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

5.	High interest	Availability of edible wild plants during the school year,	Give students a lot of experience touching, picking, eating the plants, rather than just pictures.
6.	Good after animal films.		
7.		Not many available on primary level.	

Correlating Activity #	Strong Points	Weak Points	Recommended Changes
1.	High interest		
2.	Good language arts activity.		
3.	Pantomime was good experience.		Add these pictures to the "Ways We Work and Play" scrapbook. (Motivational Activity #5)
4.	Extremely high interest in cleaning up the school environment.		
5.	High interest		
6.	Good individual thought activity	Has to be well explained before it's begin	Draw some sample sketches on the chart to get the idea going.
7.	Excellent daily language arts activity. High affective motivation.		

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Individual Study Activity #	Strong Points	Weak Points	Recommended Changes
1.	High interest. Makes classroom management easy		Do this over a period of several weeks, so many people can get a chance to do a job.
2.	Good subject matter learning activity.		Have all students do this activity.

Culminating Activity #	Strong Points	Weak Points	Recommended Changes
1.	High interest and great experience for students and parents.		
2.	High interest.		Display the environmental job briefs available from CSIU #16 for several days as a stimulus for this activity.
3.	High interest. Good for class spirit, teamwork and pride in workmanship.		Definitely display the models for the school

COMMUNICATION AND MEDIA - HELLO, WORLD!

I BRING YOU NEWS - GRADE TWO

INTRODUCTION:

The Americans, by means of telephones, telegraphs, magazines newspapers, books, radio, and television are the best informed, educated, and entertained people on earth. Society could never have progressed to its present stage without some ways of sending news and information. Animals as well as man communicate with one another.

It is intended through this unit, that children become aware of the many modes of Communication.

The students of Second Grade will spend two weeks in learning the different means of communication and how it affects our lives.

Within this unit on Communication, Marketing and Distribution will receive special attention. The concerns of Education and Career from the Pennsylvania Career Development Education Syllabus will be emphasized.

I. Objectives

A. Goals

1. To develop an awareness of the complexity and importance of Communication in society.
2. To know means of Communication.
3. To know jobs connected with Communication and their educational requirements
4. To realize some interests (hobbies) can be Careers.
5. To increase vocabulary.
6. To practice reading skills.
7. To increase observational and listening skills.
8. To understand that most aids to communicate cost money.

B. Behavioral Objectives:

1. After reading pages 94, 95, 96 on "How We Use our Senses", and "What Makes Sounds?;" all students will feel the vibrations in their throats when speaking, as indicated by a positive reaction when questioned by the teacher
2. After looking at pictures of children making sounds (Pgs. 96) five students will each mention one different thing that children are using to make sounds, with 100% accuracy
3. When asked if students know any person who has a career using their voice, at least three children will mention names of such people
4. When asked to find sound makers in the room, three children will volunteer willingly names of objects as measured by facial expressions
5. After reading pages 98 and 99 about the telephone and looking at the pictures ten children will name the careers represented

on the pages with 100% accuracy.

6. When asked the question, "Who pays the Lineman for the work he is doing?" one child will be able to tell the original source is from the family telephone bill.
7. When asked why workers put cable underground instead of on poles three children will be able to state one reason that will be accepted by the teacher as correct.
8. When asked how the telephone bill comes and how it can be paid two students will name at least two careers involved in paying the bill with 100% accuracy.
9. After a presentation by a Bell Telephone representative, all children will write three sentences in correct cursive style about the information they have learned from the presentation.
10. After reading Page 101 about the radio and looking at the picture, one child will be able to tell with 100% accuracy, why radios do not need wires like telephones.
11. After looking at the picture on Page 101 of the man using a walkie-talkie one child will be able to name with 100% accuracy, a person who used a walkie-talkie as a career and not a hobby.
12. After showing film Communication for Beginners, each student will draw a picture of one important fact that he learned from the film.
13. After playing the musical glasses five children will play simple songs that they have learned in music class with accuracy that will be accepted by the teacher.
14. After constructing make-believe telephones with cans, and a string, then students will be able to tell the message

they received with 100% accuracy.

15. After reading pages 102 and 103 about the radio station and looking at the pictures two children will be able to tell how the sound effect of the running pony was made with 100% accuracy.

16. After reading Pages 104 and 105 on television, five children will be able to write in correct, cursive style two sentences telling why television is used to explore deep in the ocean?

17. After reading pages 106 and 107 about a television station and looking at the picture, five children will be able to state one reason why the mobile studio is moved to many places, with accuracy that will be accepted by the teacher as correct.

18. After reading Pages 112, 113 and 114 on the Post Office, two children will be able to write two complete sentences telling how the letters get to the airport and what kind of machine is used to load the air mail into the plane.

19. After seeing and hearing sound effects equipment, four children will be able to name at least one career utilizing this equipment as a hobby or a career.

20. After completing the Unit, each student will answer a yes - no test on Communication with 75% accuracy.

21. After completing the unit, each student will write two sentences on what he has learned from this unit. These will contain information discussed in the unit.

22. After reading Pages 115-117 about the newspaper, three students will be able to name with 100% accuracy, two places to which company trucks take the newspapers after they are prepared for delivery.

II. Concepts and/or Generalizations

A. Knowledge of careers will produce more future career options

B. Reading is a functional necessity in our society

C. Communication is very important in any society

D. Communication skills are valuable

III. Subject Matter

A. Vocabulary terms to be Defined:

1. quality
2. pitch
3. throat
4. vibration
5. voice box
6. hoist
7. career
8. studio
9. microphone
10. signals
11. screen
12. antennas
13. transmit
14. print
15. press
16. television
17. office
18. headlines

B. Basic Academic Skills to be Developed:

1. Reading - Comprehension, Vocabulary, Oral and silent reading.

2. Economics - Functioning and financing of the telephone, radio, television and newspaper industry.

3. Science - Sound transmittal patterns and wave length lines.

C. Careers Related to the Thematic Unit Grouped by Career Clusters.

1. Transportation
   a. Taxicab driver
   b. pilot
   c. Truck driver

2. Communication and Media
   a. Linemen
   b. Cablemen
   c. Installers
   d. Operators
   e. Repairmen
   f. Arrangers
   g. Composers
   h. Messengers
   i. Announcers
   j. Television Scientists
   k. Engineers
   l. Electricians
   m. Directors
   n. Script Writers
   o. Script Writers
   p. Reporters

3. Marketing and Distribution
   a. Sales Clerk
   b. Ticket Seller

4. Public Service
   a. Postman
   b. Policeman
   c. Fireman
   d. Teacher

IV. Student Learning Activities

A. Motivational Activities

1. Students will find pictures of different means of Communication and bring them to class.

2. Motivate children by such questions as:

a. What means of communication do we make use of daily that gives us news from all over the world seconds after it happens?

b. What means of Communication would we use if we need to call a doctor or report a fire in a hurry?

B. Subject Matter Learning Activities:

1. Reading of selections from Your Neighborhood and the World, Pages 94-120, entitled "Communication in our World."
2. Viewing three films: "Communication," "Communication for Beginners," and "Communication and the Community."
3. Feeling of vibrations in students' throats.
4. Discussions of sound production, equipment and related careers
5. Discussion of telephone, radio, and TV communication, process, and related careers as suggested by textbook illustrations.
6. Participation in a hands-on tailgate demonstration by Bell Telephone representatives.
7. Playing of musical glasses.
8. Construction of tin-can communication devices.
9. Discussion of the careers and the transportation factor involved with the postal system and newspapers.
10. Discussion of hobbies and this potential as future careers.

C. Correlating Activities:

1. Art teacher supplies materials and assists in making a mural that will picture the many kinds of transportation that may be used to deliver mail from one place to another.
2. Music teacher teaches children to play simple songs that they have learned in music class with musical glasses.

D. Individual Study Activities:

1. Accelerated students will write a paragraph on Communication. They will pretend they mailed themselves in an envelope to a friend in a faraway state. They will tell the story of their adventure from the time they were collected until they were finally delivered at their friends' home.
2. Slow students will find and cut out pictures from magazines which show things that are advertised and different names of communication such as telephone and television. Additional assignments will be made from reference books.
3. Reference books for children:
    - a. I want to be a Telephone Operator by Carla Greene
    - b. Let's Go to a Newspaper by Laura Sootin
    - c. The True Book of Communication by Irene Miner (book for teac
    - d. Mail Riders - Paul Revere to Pony Express by Edith McCall.

E. Culminating Activities:

1. Guessing Game
    - a. I bring you information. What am I?
    - b. I show you the best products to buy. What am I?
    - c. I help pay for products you see advertised. What am I?
    - d. I am a special stamp that carries your letter to a faraway place in a hurry. What kind am I?
    - e. I am a short-distance portable two-way Radio. What am I?

VI. Bibliography and Other Resources

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Communications and the Community. Coronet films, Chicago, Ill., 16mm, 16 min., b/w or color; I.U. #16.

Cluster Resource Guide--Communications and Media, Intermediate Unit #16, Lewisburg, Pa., 1973; I. U. #16.

Cluster Resource Guide--Marketing and Distribution, Intermediate Unit #16, Lewisburg, Pa., 1973; I. U. #16.

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The Five Senses. Walt Disney films, Burbank, California, 16mm, 8 min.; color.

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The Postal System, Coronet films, Chicago, Ill., 16mm, 11 min, b/w or color.

The Sun and Our Earth. Coronet films, Chicago, Ill., 16mm, 11 min, b/w or color.

(A) Objectives (B) Behavioral Objective No.	Was it taught?	Was criterion met?	Was criterion realistic?	Is it re-usable?	Was it worth the time?	COMMENTS
1.	Y	Y	Y	Y	Y	Students were interested in vibrations.
2.	Y	Y	Y	Y	Y	Students mentioned additional things that make sounds.
3.	Y	Y	Y	Y	Y	Students had in mind many people on T.V. who use their voice as means of making a living.
4.	Y	Y	Y	Y	Y	Many students made expressions.
5.	Y	Y	Y	Y	Y	
6.	Y	Y	Y	Y	Y	All students realize families have bills to pay.
7.	Y	Y	Y	Y	Y	Several students responded to underground cables.
8.	Y	Y	Y	Y	Y	
9.	Y	Y	Y	Y	Y	Students were very much interested and gained a lot of information from this presentation.
10.	Y	Y	Y	Y	Y	
11.	Y	Y	Y	Y	Y	
12.	Y	Y	Y	Y	Y	
13.	Y	Y	Y	Y	Y	All students became involved in making music.
14.	Y	Y	Y	Y	Y	All students became involved in constructing make-believe telephones.
15.	Y	Y	Y	Y	Y	
16.	Y	Y	Y	Y	Y	

(1) Objectives (B) Behavioral Objective No.	Was it taught?	Was criterion met?	Was criterion realistic?	Is it re-usable?	Was it worth the time?	COMMENTS
17.	Y	Y	Y	Y	Y	
18.	Y	Y	Y	Y	Y	
19.	Y	Y	Y	Y	Y	
20.	Y	Y	Y	Y	Y	Unit was well received and children did well in the test.
21.	Y	Y	Y	Y	Y	All students enjoyed the unit and completed their sentences.
22.	Y	Y	Y	Y	Y	

C. Thematic Unit Evaluation

Give a comprehensive evaluation of the following by specifically indicating strong points, weak points and recommended changes.

(I) Objectives

(A) Goals: To teach children different means of communication. To have them realize all the jobs connected with communication. At the same time develop their vocabulary and reading skills.

(II) Concepts:

Children must be made to realize reading is a necessity in our society. Communication is very important in any society and a knowledge of careers will produce more future career choices.

(III) Subject matter:

Students learned many new terms and the meaning of them and how they applied in studying about the different careers.

1. How easily were you able to integrate the Career Education concepts into your curriculum as demonstrated by this unit?

The awareness of job opportunities of which children were taught made it easy by means of the unit.

2. What opportunities did you provide to allow input from your students, colleagues and community? What were the results of these inputs?

Students were allowed to input their experiences, the experiences they have gained from their parents and teachers. These inputs made children more interested.

3. Additional comments:

I feel it was a worthwhile experience for the teacher and I am sure students were benefited by the opportunity of becoming fully aware of career education.

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Motivational Activity #	Strong Points	Weak Points	Recommended Changes
1.	Students became aware of Communication as a means of sending news in a hurry.	Not enough emphasis placed on our every day means of communication.	Spend more time stressing communication.
2.	Use of telephone as a means of communication.	Not enough opportunity placed on use of telephone.	Stress use of telephone as a means of calling a doctor or report a fire.

Subject Matter Learning Activity	Strong Points	Weak Points	Recommended Changes
1.	Students read material from text.	Too much time spent in book discussion.	Have material from text discussed more fully with more emphasis on important things.
2.	Students enjoyed films and realized communication affects our community.	Too much time spent on films and not enough on discussing films.	Preview the films more often before showing them to students.

Correlating Activity #	Strong Points	Weak Points	Recommended Changes
1.	Students became interested in making mural.	Students were more involved in making the mural than they were in what they were to learn	Discuss the purpose more fully before work is begun.

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Correlating Activity #	Strong Points	Weak Points	Recommended Changes
2.	Students became involved in the glasses more than the opportunity of making the music.	Too many children were involved.	Discuss the songs more fully before work is begun.
Individual Study Activity #	Strong Points	Weak Points	Recommended Changes
1.	Students realized fully the trip a letter takes.	Students became too involved in minute details.	Discuss more fully the entire procedure of a letter from the time it is sent until it is received.
2.	Students had a good opportunity to find people involved in different careers	Too much time spent on cutting.	Have pictures ready so not so much time is spent in looking for them.
3.	Some students gained much information from reference books.	Too many students with reading problems were not able to read.	Find more simple books for reference material.

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Culminating Activiey #	Strong Points	Weak Points	Recommended Changes
1.	Students were interested in Guessing Games.	Students were too eager to stray from Guessing Games on the Unit.	Have students decide on Guessing Games before they are permitted to present them to the class.

CITY BASED CAREERS AS RELATED TO ENVIRONMENT AND ECONOMICS

GRADES K - THREE

INTRODUCTION

The social studies text used by third grade students in the Millville Area Schools is *Our Working World* by Science Research Associates, Inc. Since the entire text is devoted to the study of cities, this particular TRACE will be devoted to city-based careers in relation to environment and economics as described in the Pennsylvania Career Development Guide.

Dependent upon the children's interest level, and the number of activities chosen by the students, a minimum two-week time limit may have to be extended to a maximum of four weeks for the unit.

An integral part in the development of this TRACE has been the consideration of motivation of students toward better learning.

Since our school is located in a rural community setting, it is hoped this study will help children gain a better understanding of city-based careers in relation to environment and economics.

I. Objectives:

A. Goals:

1. Students should understand the variety and complexity of occupations and career opportunities in the world of work as related to a city environment.
2. Students should be aware of their own multipotentiability relative to the development of marketable skills in a city environment.
3. The student should recognize that worker productivity is influenced by a variety of rewards and satisfactions such as money, prestige, personal satisfaction, and accomplishment.
4. Students should understand the nature of technological and environmental changes and their effects upon the world of work.
5. Students should learn that a person's relationships with other people, with his employer, and with society affect his own career as well as the careers of others.

B. Behavioral Objectives

1. Having studied cities in social studies, and provided with the necessary tools and materials, each child will design and build one of the following models of city life:
   (a) parks and/or playgrounds,
   (b) fire departments,
   (c) Schools,
   (d) Hospitals,
   (e) dwellings,
   (f) service stations,
   (g) Gymnasiums.

   Criteria for acceptance will be previously decided by the teacher and students, and will include shape, size, and neatness.

2. Having studied cities in social studies, each third grade child will interview one person who has worked in some city-based profession or career. The child will present to the class a tape or an oral and/or written report in terms which could be understood by their peers. The report would include:
   (a) name of profession or career,
   (b) Description of profession or career,
   (c) How this profession or career would relate to our life here in the classroom.
3. Having studied cities in social studies each third grade student will demonstrate acceptance of the opinions of other students, through lack of negative reactions, that which constitutes aesthetic value in some aspect of city life such as:
   (a) architecture,
   (b) landscaping,
   (c) residential developments,
   (d) business districts.
4. Having studied cities in social studies, each third grade child will learn to spell with 80% accuracy a choice of ten out of fifteen vocabulary words.
5. Given a list of fifteen occupations, each third grade student will categorize ten of them in terms of belonging to a goods-producing cluster or a service-producing cluster with 100% accuracy.
6. Having been exposed to resource persons through personal interviews related to city-based careers, each third grade child will voluntarily choose at least three career titles in which he feels he is most interested, and depict through some media, at his own

level of proficiency, a display for parent visitation.

7. Having studied cities in social studies and having visited Harrisburg, each child will be asked to work on a committee to study some aspect of city management, such as:
    (a) Planning commission,
    (b) city government,
    (c) protection agencies,
    (d) utilities,
    (e) transportation systems.

    Each child will work with others in his own group without fighting or arguing. Each committee will make a model and then prepare and deliver a report with a minimum of one observation relative to the topic from each committee member.

8. Using a series of pictures related to above-mentioned reports, each third grade student will identify, with 85% accuracy, the category to which each picture belongs.

II. Concepts or Generalizations:

1. People have many kinds of careers.
2. Every individual can have a meaningful, rewarding career.
3. A person may be suited for several different careers.
4. Changes and conditions in the world affect careers.

III. Subject Matter:

A. Vocabulary terms to be defined:
    1. environment
    2. career
    3. economics
    4. urban
    5. market

6. specialization
7. goods
8. services
9. raw materials
10. income
11. profit
12. wholesale
13. retail
14. industry
15. ghetto

B. Basic academic skills to be developed:

1. Judgmental - Each child will, through mental or intellectual process, form opinions or evaluation by discernment and comparison.
2. Manipulative - each third grade student will learn to manage with the mind or intellect situations to achieve certain advantages, not only for himself but also for the good of others.
3. Comprehensive - Third grade students will cover matters under consideration in this unit of work, completely or nearly completely, dependent upon the individual's capability.
4. Analytical - Students will clarify statements through a determination of their meaning or logical use.
5. Observational - Students will give attention to models, ideas, and all aspects of this unit through the use of one or all of the senses.
6. Language development - Language arts will be incorporated into all phases of this unit through reading, writing, speaking, spelling, and listening.

C. Careers Related to the Thematic Unit grouped by Career Clusters:

1. Marketing and Distribution
    a. accountant
    b. bookkeeper
    c. salesman
    d. deliveryman
    e. receiving clerk
    f. repairman
    g. swamper
    h. dispatcher
    i. fruit grower
    j. farmer
    k. check-out clerk
    l. store manager
    m. security guard
2. Environment
    a. biologists
    b. chemists
    c. naturalists
    d. foresters
    e. sanitation workers
    f. soil scientists
    g. meteorologists
    h. engineering technicians
3. Construction
    a. carpenters
    b. bricklayers
    c. plasterers
    d. electricians

e. plumbers

f. iron and steel workers

g. welders

h. draftsmen

i. civil engineers

j. tool and die maker

k. salesmen

l. landscape experts

m. inspectors

n. glazers

D. Other topics:

Specific occupational information such as educational requirements, salary range, and job opportunities for careers related to the thematic unit can be found in the information derived from the Occupational Outlook Handbook, PENNScript, Grayson County College's Analysis of Fifteen Occupational Clusters, which can be obtained from Career Education Services, C.S.I.U., Box 213, Lewisburg, Pa. 17837

IV. Student Learning Activities:

A. Motivational Activities

1. In order to give children some idea of crowded conditions in cities, move half of desks side-by-side in the center of room. Draw a red line with magic marker through desk-top center and have two children share one desk for at least 1/2 school day. No child is to be allowed his arm, pencil, books, or any personal belongings on his seat mate's half of the desk.

2. To give children some insight into the plight of the city dweller concerning inadequate lighting (where buildings are crowded together) draw drapes or shades for a listening

experience while teacher reads (see language arts correlation) using a flashlight for illumination.

3. Air pollution in cities might be shown by:
   (a) releasing hydrogen sulfide,
   (b) breaking a rotten egg,
   (c) uncork a bottle of household ammonia for short periods in different areas of the room,
   (d) sprinkle iron filings, or sand, or fine soil on desks while children are out at recess.
4. Representative Kent Shelhamer's "seat" in our state government will be shown the children during our tour. If possible, since he resides in Columbia County, perhaps the children could compose a short letter asking him to contrast his life as a Columbia County farmer and apple grower with that of his city-based career in government. This may be a presumptuous demand upon a busy life, but if he got enough requests of this type he might consider a form letter to save time.
5. The game of "Market" will be played for one entire school day with one two-hour introductory period of play and a shorter period of final play to give retailers opportunity to become consumers and vice-versa. This game, by William D. Rader, Katherine E. Chapman, and Linn Orear, simulates retail supply and demand, with participants acting as wholesalers, retailers, and consumers. Eighteen to forty may participate in a playing period of one or two hours, but this writer would suggest longer play periods because of the tremendous learning experiences which come out of this activity. David Zuckerman, in reviewing the game said that "Market" is the only intellectually respectable, interactive economics game available for really young children."

This is available from Industrial Realtions Center, University of Chicago for $50.00.

6. Films and poetry will be used throughout TRACE unit for a motivation, review, and reinforcement.

B. Subject Matter Learning Activities:

1. Field trip to Harrisburg, Pennsylvania
    - a. Capitol building,
    - b. Governor's Mansion,
    - c. William Penn Museum,
    - d. Planetarium
2. The third grade students will make a "sketch and note log" of their trip, with special emphasis to be given different occupations encountered. These will then be compiled into one classroom endeavor during the week following the trip.
3. Films, as listed under resource materials.

C. Correlating Activities:

1. Spelling:

    Children could be given a choice of ten of the fifteen vocabulary words to learn. They would be required to spell these with 80% accuracy.

2. Mathematics:

    Children will be given "Shoemaker dollars." Each child will be given the same amount for a "starter." From the point of initiation, our children will be given opportunity to earn more by:

    - a. investing in a business such as:
        - (1) bathroom company - each time a child desires bathroom privileges he must pay the bathroom company $10.00. Recesses and noon hour are free.

(2) Pencil company - a child who loses his pencil can buy one for $10.00 from the Pencil Co., or rent one for the day for $5.00.

(3) Eraser Company - works in much the same way as the Pencil Co.

(4) Sharpening Company - if a child needs to sharpen a pencil during school time (again recess periods are free), he must pay the company $10.00.

(5) Police Chief - any child who leaves his seat, or talks, if teacher leaves room for phone calls, etc., must pay Chief of Police $10.00 for each "misdemeanor."

(6) Sanitation Department - "Taxes" of $1.00 per child will be collected to pay the Sanitation Department for "extra" clean up activities after art experiences, parties, etc.

(7) Safety Officer - if this person finds someone sitting with his chair tipped back, or doing anything that could possibly result in injury to himself or others, the "culprit" will be fined $10.00. There must be reliable witnesses to the act.

(8) Information Company - any child who has not listened to, or has forgotten directions, given by teacher in any subject area must pay the Information Company $10.00 for same.

(9) Banker - the child chosen for banker must be a good mathematics student because he must keep a record of each classmate's bank account, make change, make loans, charge interest, etc. He will be given a salary of $1,000.00 per month.

(10) Secretary - will also receive a salary of $1000.00 per month. This must be someone who is a good student of mathematics as well as having neat handwriting since this person will be keeping a record of all classmates right answers for each day. On Fridays (banking day) all right answers will be converted to Shoemakers dollars and entered into their proper accounts. Correct answers are paid off at the rate of $1.00 to $10.00 each, dependent upon difficulty of material.

B. The teacher will be on the look out for "warm fuzzies" throughout each week and a special "warm fuzzy award" will be given each week. This will be given in the amount of one thousand Shoemaker dollars to some child who has said something, or done something, especially nice for another child.

C. Children will be given Shoemaker dollars for their chosen "classroom career for the week."

NOTE: On banking day, the children will have opportunity to spend their Shoemaker dollars for small items furnished by the teacher. However, the exciting part comes once each month (when all businesses are sold and a new banker and a new secretary are appointed.) After the new businesses have been established and paid for by the highest bidder, with price of bid going to the former owner of the business. THEN we will have our auction of merchandise such as:

1. A fleet of Matchbox cars.
2. Four "seats" in my car to a special place of interest in the area for an after-school excursion. (such as a game farm, museum, etc.) with a "surprise"

to be thrown in (such as milk shakes at a local dairy bar)

3. A good book of children's literature.

NOTE: The basic idea for the classroom economic system is not original with this writer, but was put into effect and has been used with great success, in our third grade classroom after having read Allan E. Harrison's How To Teach Children Twice as Much, as listed in the Bibliography. The possibilities for adaptation are endless.

D. Children will be taught how to make change with real money (Shoemaker dollars are paper issue only) before their field trip to Harrisburg to facilitate procedure in the William Penn Museum Gift Shop. The more able students should be able to help the slow learner so that every child will be self-reliant concerning his personal spending money.

3. Science and Health:

   Students could be presented with the Air Pollution model and lessions which are available from the Susquehanna Valley Tuberculosis Society. Children could be asked to make posters relative to this unit.

4. Language Arts:

   a. Children will be asked to interview someone who has visited the city or someone who has a city-based career. This may be done in written question and answer form, or in a taped interview to be played for classmates. Any child who wishes to, may bring the interviewee into the classroom for personal interviews if he sets up a time schedule for same with the teacher.

   b. The teacher could read to the children, From the Mixed-Up Files of Mrs. Basil E. Frankweiler, as a listening experience on city life. A month or two after the reading of the book, the record could be played for reinforcement.

c. "Incident" the poem by Countee Cullen, could be used to show children how it might feel to be called, "nigger" when one is visiting a city for the first time at the tender age of eight.

d. "City Streets and Country Roads", by Eleanor Farjeon could be used to contrast city life and country life.

e. "E is the Escalator" by Phyllis McGinley would be used before our field trip to Harrisburg since some children will be on an escalator for the first time in the William Penn Museum.

f. "Motor Cars," by Rowena Bennett would be used as motivation for children's consideration of depth perception when viewing cars from "a city window, way up high."

g. "City Rain" by Rachel Field could be used to get children to consider how something as commonplace as rain could be "different" in the city than in the country. How could rain in the city affect different careers? This would be in relation to Concept #4.

5. Music:

The song "What is a City?" could be taught at the beginning of the unit and used at appropriate times. This is by Trachtman and Aronson and is included in the SRA Our Working World, teacher's manual.

D. Individual Student Activities

1. Personal interview (to strengthen the concept that people have many kinds of careers.

2. Construction of a model to show differences in design and skill in relation to Concept #3. Resource persons such as building contractors, stone masons, plasterers, painters, etc. could be used to advantage to make this a more meaningful activity and to strengthen the above-mentioned concept.
3. Essay composition to be specifically related to concept #2.
4. Poster creations. This will be closely related to Concept #4 since the posters are to be concerned with pollution and changes and conditions in the world which affect careers.

E. Culminating Activities

1. The classroom would be open to parents at any time during the TRACE unit. However, a special invitation would be given parents and interested friends for a specific afternoon hour and again in the evening to show:
   a. Model city built by children.
   b. Video-tape showing of children's activities throughout the unit.
   c. Sharing time between parent and child.

VI. Bibliography

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Cities and Geography. M.G.H.T.: 10 min., color; I.M.C., I.U.#16

Cities and Shopping. M.G.H.T., 8 min, color; I.M.C. I.U.#16

Cities and Surburbs. M.G.H.T.: 8 min. color; I.M.C., I.U.#16

Cluster Resource Guides Intermediate Unit #16, Lewisburg, Pa. 1973

Food for the City - Produce. B.F.A.; 12 min., color, I.M.C., I.U.#16

Food for the City - Wheat and Flour. BFA; 11 min., color. I.M.C., I.U.#16

Market. University of Chicago, 1972; I. U. #16

Money in the Banlk. Coronet Films; 15 Min., color; I.M.C., I.U.#16

Popeye comics. King Features, N. Y.: I.U.#16

Story of the Wholesale Market. Coronet films; 11 min., color; I.M.C., I.U.#16

CAREER CORPS

Primary Grades

INTRODUCTION:

It is the intent of this unit that students in Homeroom Four will develop a positive self-concept, awareness of a family (i.e., the jobs of each family member and of his role as a cooperative group member), economic awareness, and knowledge of basic consumer skills.

Concerns of 'self' and 'economics' are to be integrated with the Pennsylvania Quality Assessment Goals number I and IX, by means of the Pennsylvania Career Development Education Model.

The student as a consumer and family member, can identify with the cluster of Consumer and Homemaking, through living experience and identify with the Marketing and Distribution Cluster, because of the family's dependence on goods and services and need for consumer products.

This unit will need at least one month for implementation and, depending on scheduling, perhaps six weeks or two months will be needed.

Chitter C. Cluster, a hand puppet, and Chatter C. Cluster his sister will be the means of integrating the media; (i.e., an eight-millimeter movie of two field trips; slide presentations of the Career Corps Alphabet (an awareness activity); and the culminating activity, a vidio-taped program for parents and school children); into the unit. The puppet approach can be an arbitrary one. However, the original Career Corps Alphabet will be available for use in other schools, in addition to a slide presentation which shows how many careers can be attained at the Columbia-Montour Area Vocational Technical School without an additional college education.

I. Objectives

A. Goals

1. The development and implementation of Career Education at the Elementary school level to provide students with learning experiences related to career awareness, orientation, and exploration.
2. Students should develop vocabulary for distinguishing 'self' - characteristics such as interests, attitudes, values, roles, and self-concept, etc.
3. Students should develop knowledge of their own unique pattern of personal characteristics (i.e., abilities, interests, values, attitudes, etc.)
4. Students should develop awareness of jobs of each family member and of his role as a cooperative group member.
5. Quality education should help every child acquire the greatest possible understanding of himself and an appreciation of his worthiness as a member of society.
6. Quality education should help every child to understand and appreciate as much as he can of human achievement in the natural sciences, the social sciences, the humanities, and the arts.
7. Students should acquire basic consumer skills.
8. Students will learn that careers can be grouped into clusters and will study the Consumer and Homemaking and Marketing and Distribution clusters.

B. Behavioral Objectives

1. Given a list of descriptive phrases (i.e., "I like football," "I can print my name," etc.) the student will be able to categorize a list of ten items that distinguish him from other members of the

class, in both oral and written form in terms of interests, aptitudes, or abilities.

2. After participating in guided group discussion, each member of the class will define, to the teacher's satisfaction, a group of five of his own sub-characteristics (i.e., height, weight, strengths, weaknesses, likes, dislikes, etc.)
3. Given a vocabulary list of "feeling words", (i.e., sad, happy, disappointed, etc.) the group will demonstrate the meanings of at least 50% of the words by pantomining the words.
4. Have students make a personal list of at least five words that describe himself. In a personal conference with the teacher, he will give one reason for the selection of each word.
5. Given paper, pencil and crayons, the students will draw, at his level of ability as judged by the teacher, at least three things or activities that interest him.
6. Given a choice of a wide range of tasks or activities, (tie shoes; write name; cut a circle, triangle, square, rectangle,) the student will indicate those tasks or activities that he is able to perform and he will perform a pre-selected number of tasks to the satisfaction of the teacher.
7. Given an appropriate example, the student will write a five line riddle on "Who Am I"? Riddles are read to the class by the teacher. If ten children can guess correctly the identity of the person, mastery of this objective will be met.
8. Given paper, pencil, and crayons, the student will demonstrate his awareness of his own position in the family by drawing pictures of his family at various time intervals (i.e., when he was a baby and now.) He will construct three picture activities and responsibilities

associated with his family role at each of these stages.

9. Given a unit of instruction on family, the class will distinguish the different composition of a family. They will describe how various members of a family usually share the same name, live at the same address, and have the same phone number. They will include their own personal information on a page in their own "My World" booklet, which contains all the behavioral objectives 1 - 10.

10. Given reading materials in social studies or assignments, or pictures of George Washington, Abraham Lincoln, Clara Barton, and Amos Fortune the student will choose, for his "My World" booklet, the person in this group that he feels has had the greatest personal achievement. They will compare the achievement of each person listed, orally and through teacher guided discussion, give two reasons for the person believed to have had the greatest personal achievement.

11. Given participation in the "Magic Circle," HDP program, students will translate the Daily cues into the affective, cognitive, and psychomotor domains, on a voluntary basis.

12. Given a list of four objects (i.e., a house, car, and table and a doll), the student will, using crayons, draw a picture of the object which generally costs the most to buy.

13. Given a theoretical "present" of $1.00, the pictures of 20 items with prices in round figures (i.e., $.10, $.20, etc.) the student will be able to select items a family may wish to buy which would cost in total, less than a dollar.

14. During a field trip to two stores, one a small privately owned food store and the other a large supermarket, students will choose

the most economical price for each item to be purchased for a class party.

15. After the field-trip, children will, on a check-list write ten items marketed and distributed for the home use and name the career cluster it came from (i.e., Agri-Business, Consumer and Homemaking, Manufacturing, Health, etc.)

16. Given an opportunity to talk, the student will voluntarily describe all members of a family by "role-playing" what each would buy.

17. After the presentation of video-tapes and other media of a local floral business, the class will name orally four kinds of transportation used for marketing and distributing the product.

18. After having been given instructions about making the booklet, "My World", students will demonstrate "valuing" by answering the question "Who am I", by drawing a self-protrait and including a small school picture in the booklet for a mother's or father's day gift for parents.

19. To the teacher's satisfaction, students will demonstrate how jobs with food, clothing, and textiles, home furnishings and families are dependent on marketing and distribution by creating a graphic display, using pictures and/or original art work, suitable for presentation at the school exhibit at the Bloomsburg Fair, September, 1974.

20. After using the "Fox the Cashier Game," 100% of the students will reconstruct math skills and count money and make change accurately using dollars, quarters, dimes, nickles, and pennies. Mastery will be met if 80% of students make the change accurately.

21. After viewing several career education films, one of which is The Money Tree, and completing Pre-and Post-tests; the class will

discuss the importance of wise spending and discuss why planning is important for families. Mastery will be met if 90% of the students participate in the discussion positively.

22. After two field trips, one to a small privately owned grocery store and a large Acme supermarket and another to the Acme produce distribution warehouse in Forty-Fort and the educational Television Studio WVIA-TV Public Broadcasting Center, Pittston, Pennsylvania, the students will recall human achievement in the natural sciences, the social sciences, the humanities, and the arts and each will recite two ways this human achievement has made their lives better.

23. After a visit to the Fine Arts Department of Bloomsburg State College and participation in a college Children's Theater, class, the students will each participate in pre-planned creative dramatic activities directed by the college students, and Mr. William Acierno.

24. After having Mrs. Anna Mae Lefr, Columbia County Home Economics Representative, visit the class as a resource person, students will participate in her talk by using consumer knowledge to purchase food items she has brought for the demonstration.

25. As the final culminating activity, students will participate in a video-taped program. After being introduced to the Career Corps Alphabet, each child will name a different Career Corps Letter and demonstrate the career card and tell three things about the career.

26. After completion of Chitter's Career Corps, students will demonstrate a broad awareness of occupations that contribute to community welfare. Students will 1. collect reusable scrap metal, glass, or paper, 2. (clean up the environment) clear unsightly areas in the neighborhood, 3. visit and do odd jobs for elderly or handicapped, 4. work with the fire department to promote fire prevention (make safety posters), 5.

"adopt" the afternoon Kindergarten class and help them build a filling station in their classroom. Each student will have a score card with records of performance in at least three of these Career Corps Activities.

II. Concepts and/or Generalizations

A. Awareness that:

1. People have many kinds of careers.
2. Every occupation contributes to society.
3. Every individual can have a meaningful rewarding career.
4. Careers require different knowledge abilities, and attitudes.
5. Every person is an individual with different abilities, interests, and needs and values.
6. Different occupations are interrelated in many ways.
7. Getting goods and services of buying from the manufacturer, shipping, storing, advertising, and selling all involve other career clusters.
8. A person may be suited for several different careers.

III. Subject Matter

A. Vocabulary terms to be defined:

1. interests
2. aptitudes
3. values
4. roles
5. Self-concept
6. parents
7. relatives
8. mother
9. father
10. grandparents
11. brother
12. sister
13. baby
14. uncle
15. aunt
16. cousin
17. group
18. neighborhood
19. community
20. rules
21. jobs
22. food

23. clothing
24. shelter
25. buy
26. earn
27. money
28. pay
29. meat
30. vegetables
31. fruit
32. cereal
33. consumer products
34. farm
35. wool
36. cotton
37. leather
38. plastic
39. fur
40. nylon
41. hides
42. furniture
43. housing
44. household equipment
45. textiles
46. goods and services
47. customer
48. manufacturing
49. shipping
50. storing
51. advertising and selling
52. dollars
53. quarters
54. dimes
55. nickles
56. pennies
57. career
58. cluster
59. career education
60. occupations
61. human achievement
62. marketing and distribution
63. community welfare

B. Basic Academic Skills to be Developed

1. Language Arts: Language experience approach to reading: Chitter's Career Corps News - a daily teacher written newspaper telling of career corps activities and concepts.
2. Creative writing - original stories to be used for the fair display.
3. Printing - "My World Booklet", tests, etc.
4. Multi-Sensory beginning reading and spelling skills used with the social sciences.

5. Art - creative drawing - booklets for fair display building a cardboard box filling station.
6. Math - money skills, counting, addition, subtraction, telling coins, set and sets notation.
7. Creative Dramatics - Role playing community helpers - Role playing emotions.
8. Health - Diet, exercise, rest.
9. Physical Education - Games in Career Education relays, simulations, knowledge of how athletics can be a career.
10. Social Studies - Awareness skills of these several clusters: Business, Homemaking, Fine Arts, Recreation, Health, Marketing, and Public Service; appreciation and understanding of human achievement by famous people in history; knowledge of the astronauts and participation in activities that contribute to community welfare.
11. Science - Awareness skills of several clusters: Transportation, Study or the Sea, Manufacturing, Health, Environment, Newspaper, Radio and TV, Farming, Forestry and Mining, and Building. Experimentations in basic physical science; states of matter (solid, liguids, and gas) knowledge of biological science, plants, farm animals, and the family.

C. Careers Related to the Thematic Unit Grouped by Career Clusters

1. Marketing and Distribution:

    a. Mechanic
    b. Salesman - General - Food - Real Estate
    c. Bank Cashier
    d. Repairman
    e. Service Station Attendent
    f. Clerk - Shipping and receiving store
    g. meatcutter
    h. advertising - media
    i. Routeman
    j. Manager - agricultural store
    k. Artist - Commercial Artist
    l. Writer - Technical
    m. Truck driver

2. Consumer and Homemaking Education;

    a. Dietician - Chef - Cooks
    b. Repairman - TV
    c. Upholsterer
    d. Home Economist
    e. Interior Decorator
    f. Seamstress - Sewing Machine Operator
    g. Baker
    h. Private Household worker
    i. Homemaker
    j. Painter
    k. Advertising - Media
    l. Meat cutter
    m. Gardner - Ornamental Horticulturist
    n. Shoe Repairman
    o. Model

IV. Student Learning Activities

A. Motivational Activities

1. Field Trips;

    a. To a small privately owned grocery store and a large supermarket to contrast differences in marketing and distribution and consumer products.

    b. To the Acme Product Warehouse to see how produce is collected before it is distributed to local stores.

    c. Students will visit a large supermarket warehouse and conclude how consumer and homemaking products (food, etc.) are dependent on marketing and distribution.

    d. To the Buckhorn Truck Stop to see all the trucks and note how marketing and distribution depend on them since the railroad service in this area has become passe.

    e. Students will see how trucking (transportation) moves the goods to local stores by visiting the warehouse distribution center and by visiting the Buckhorn Truck Stop.

    f. To Bloomsburg State College to see the college and interact creatively with a college class in children's Theater by means of creative dramatics.

g. To the WVIA - TV Educational Television Public Broadcasting Center in Pittston to become aware of careers in communication and media and advertising as it influences the homemaker and marketing and distribution.

h. To the Bloomsburg Fire Department and Police Station to become aware of community welfare (services.)

2. As the ultimate motivating device the Career Corps is to be introduced the first day of the unit.
    a. Students will earn membership in the Career Corps by participating in at least three community welfare type activities.
    b. Students will simulate the Youth Corps, as the Career Corps, and demonstrate awareness of occupations that contribute to community welfare by means of: recycling; helping the elderly or handicapped; cleaning up their environment (home, school, community); giving enrichment instruction to Kindergarten (filling station), by "adopting" them; and by promoting fire prevention.

B. Subject Matter Learning Activities

1. Students will develop knowledge of the Career Corps by earning membership by recycling, helping the elderly or handicapped, cleaning up the environment, adópting the afternoon Kindergarten, or fire prevention.
2. Mrs. Ruth Kressler and Son - Flint, to talk about homemaking and to demonstrate how to make a stuffed animal like "Boozer", (a toy St. Bernard). Pupils help make stuffed toys by stuffing them. The toys are raffled off to class.
3. Students will see a stuffed toy made and see a mother and son, interact

And see a homemaker as a 'career'. Also they will see one of activities of a homemarker: sewing.

4. Mr. Fred Kressler - Teacher - Mechanic. Is Mrs. Kressler's oldest son and after the family portrait is shown; answers the questions: Who is the homemaker? Whose Mother is our guest? What does a homemaker do? If your mother a homemaker? (These questions are listed on the chalk board.)
5. Students will be visited by a various resource people that dispense occupational information to develop awareness.
6. Mrs. Gloria Gearhart - Fourth Grade teacher with a recycling program which we will contribute to, with metal, glass, or paper.
7. Students will be informed of consumer skills as related to homemaking by home economists, Mrs. Anna Mae Lehr with a demonstration of good values in food.
8. Given a theoretical "present" of $1.00, the pictures of 20 items with prices in round figures (i.e., $.10, $.20, etc.) the student will be able to select items a family may wish to buy which would cost in total, less than a dollar.
9. Math skills were reviewed with money management and consumer knowledge
10. The Consumer and Homemaking career cluster correlates with the Marketing and Distribution career cluster because of the Homemakers' and consumer's dependance on marketing and distribution and needed for goods and services. During a field trip to two stores, one a small privately owned food store and the other a large supermarket, students will choose the most economical price for each item to be purchased for a class party.
11. After the field-trip, children will, on a check-list, write ten items marketed and distributed for the home use and name the career cluster

it came from (i.e., Agri-Business, Consumer and Homemaking, Manufacturing, etc.)

12. Mr. Woodrow Wolfe, Acme Store Manager - to guide field trip to large supermarket.
13. Mr. Rocky Maxwell - to guide field trip to Valley Distribution and Storage Co. in Pittston, PA.
14. After the Bloomsburg teams' visit to a local floral business, students will view video-tapes, slides, and 8mm movies and identify four means of transportation used to market and distribute the product to the consumer and/or homemaker.
15. Mr. Pat Haggerty - Bloomsburg's Chief of Police guided field trip to Police Station.
16. Mr. Robert P. Leighow - Fire Chief - Buckhorn Voluntary Fire Company and judged the best three fire prevention posters. Also, Mr. Leighow brought the fire truck to school and told about the Buckhorn Volunteer Fire Company.
17. Children will visit Bloomsburg State College and under the direction of Mr. William Acierno - College Instructor.
18. Role-playing; Creative Dramatics, and Career Corps membership.
    a. Students will role play community helpers and family members.
19. Students will participate in Creative Dramatics Exercises at B.S.C. and view original B.S.C. puppet productions at the school, as a form of self-expression.
20. Draw a picture of one of four objects (i.e., a house, a car, a table, a doll) which costs most to buy, using crayons.
21. Student will use consumer skills and using a theoretical present of $1.00 select consumer products or foods which a family would buy that cost less than $1.00.

22. During the supermarket and small store trip, students will buy items for a class party at the most economical price. Students will, using a check list, identify ten items and list the career cluster it came from.

23. The Affective Domain, i.e., feelings and emotions were expressed through role-playing and creative dramatics and helping others in the Career Corps.

24. Art skills were used to build the Kindergarten simulation of a filling station and to illustrate the "My World" booklets.

25. Students will interview a filling station attendant, mechanic and trucker at the Truck Stop.

26. Students will develop awareness of 'self' by making an original booklet "My World" for parents for a Father's or Mother's Day Gift.

27. Students will categorize either in oral or written form, "His World" in terms of interests, aptitudes, or abilities (for the booklet).

28. Students will define personal interests by drawing with Cray-Pas, three things he enjoys doing.

29. Students will define his own sub-characteristics (i.e., height, weight, strengths, weaknesses, likes, dislikes) by talking about them and filling in a teacher prepared questionnaire which lists these items.

30. Students will pantomine feeling words (i.e., sad, happy) on the Field Trip to Bloomsburg State College Drama Department.

31. Language Arts was used in writing creative stories, and in preparation of the "My World" booklets for parents, and thank-you letters.

32. Mr. Russ Guthrie will visit the class April 10, 1974, and introduce computer testing in first grade; also tests will be administered and scored. The pupils will have an opportunity to use the West Chester

Computer and practice first grade math drills. Mr. Russ Guthrie - Director of Computer Services, CSIU.

33. Students will visit the educational TV Channel WVIA-TV and sees careers related to media, how many of their favorite shows originate from other cities, and be familiarized with video-taping, etc.

34. Mr. George Strimel - General Manager - Educational Channel WVIA - TV Engineers will tell about careers in public broadcasting. As preparation for their own show, students will visit the educational TV Channel WVIA in Pittston and note media related careers, and that many of their favorite shows originate from another city.

35. Career Education Games and Music activities were a part of the Career Corps Membership.

36. Awareness of many career clusters has come about with the development and implementation of the Career Corps Alphabet. The Social Sciences had better impetus due to the awareness of the fifteen career clusters. These subject matter activities, increased understanding.

37. Students will read books from the Bibliography list and view two career education films which creates awareness of career clusters.

38. Mr. Donald Smethers - Principal W. W. Evans School talked to class about the career of school principal.

39. Mr. Don Levan - Custondin - W. W. Evans School told the class of the importance of his job, etc.

40. Mrs. Beaver, Mrs. Hons, and Mrs. Karnes - cooks - W. W. Evans school talked to class when they were introduced to the Career Education Card C is for Cook preparing our food.

41. Students will have met all the Career Corps Alphabet by the end of the third week of the unit. Each lesson will have one Career shown for each alphabet letter on certain days, more than one letter career

card will be introduced, depending on time. Students develop a positive self-concept by: these subject matter activities and also relate to the family by the following activities.

42. Students will list five words that describe him, and tell the teacher what he feels they mean. Students will complete numerous mastery skills for booklet: tie shoes, write name, cut circle, square, rectangle, write creative story about the career he would like to have as an adult and illustrate with picture. (Some children will only be able to draw a picture.)

43. Since children love riddles at this age, students will compose a riddle "Who am I?" for class program. The Riddle will tell five things about the individual. (The teacher will print these for those unable to do their own.)

44. Students will draw with crayons, two pictures at different time intervals in his life (i.e., as a baby, and now,) and show three activities or responsbilities.

45. Students will fill in another teacher prepared page for "My World Booklet" which includes: personal information, name, address, phone number, family size, school photograph and self-portrait.

46. Students will draw three family members and their jobs in the community or home, with crayons.

47. Students will select magazine pictures most like him and discuss likeness and differences.

48. Students will arrange themselves in groups, according to similar physical traits, in the classroom.

49. Students will note father's and mother's occupation, for booklet, with crayons.

50. Each student will name three basic differences between himself and another student in the class.

51. In the first grade social studies program students will be introduced to George Washington, Abraham Lincoln, Clara Barton, Amos Fortune, Balboa, Columbus, Marco Polo, John Glenn, and the astronauts and tell and draw or select a picture the person he feels has made the greatest personal achievement for his "My World" booklet.

52. During the year students have participated in the "Magic Circle", and will continue to do so during this unit. HDP stresses the three domains (cognitive, affective, and psychomotor) many cues will relate to Career Education. After viewing the film The Money Tree, students will have completed pre- and post-tests and will discuss the importance of family planning finances and how not planning can spell disaster. Pupils will complete pre- and post-tests before and after the film, to assess any changes in attitude.

53. Students will role-play the way a young child and an older child might behave in a family situation.

54. After the social studies unit on family, the student will distinguish the different compositions of a family.

55. Students will play "Fox the Cashier" Game, review money counting skills.

56. Mrs. Dorothy Wagner bus driver and owner of Wagner's Fruit Farm, hosted a field trip to the Fruit Farm and showed the career of agri-business.

C. Culminating Activities

1. A multi-media "Show and Tell" program for parents with: 8mm movies,

video tapes of the children with the Career Education Alphabet, also the slide and tape presentation.

   a. Students will "Show and Tell" Career Awareness with the Career Corps Alphabet and Membership and Knowledge of Marketing and Distribution and Consumer and Homemaking with their final program for parents and school children.
   b. Students will participate in a video-taped Career Corps Alphabet and "Show and Tell" of the unit for parents and fellow students.

2. Students will be photographed with the Career Corps Alphabet Cards for the Morning Press. Also, they will have another photograph which tells about Chitter's Career Corps, Membership, the requirements to join, etc. Newspaper coverage of Career Education Unit.
3. Parents, family, and community involvement: Parents and community resource people will voluntarily become part of the Bloomsburg Role Model catalog.
4. Parents and students will help the teacher prepare for a graphic display for the September 1974 Bloomsburg Fair.
   a. The display will have:
      1) video tapes
      2) slides presentation: which links the Career Education Alphabet Cards with the Area Columbia Montour Vocational Technical School and possible careers that can be attained at the vocational high school.
      3) Materials from other TRACE units taught in the Bloomsburg Area School District.
      4) Pictures of children and original work.

V. Evaluation

A. Evaluation of Student Achievement of Stated Objectives

1. Behavioral Objectives 1-27 will be evaluated on individual check lists, for inclusion on report cards in the form of M for mastery R for recycle.
2. Tests - (pre- and post-testing.)
3. Questionnaires (Computerized)
4. Behavioral Objectively related Teacher's critique.
5. Behavioral Objectively related Student's critique.
6. A teacher made Pupil Testing Service Test will be made in the true-false, multiple choice testing concepts made and will be scored by computer.
7. Also, the Pupil Testing Service will be used to analyze the M-Mastery or R-Recycle responsed of the whole class in (1) percentage scores or number right (M) or the number wrong (R) and the number omitted. This testing will be done through the Media II CSIU Course offering.

VI. Bibliography and Resource Materials

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Hoff, Syd. Who Will Be My Friends? New York: Harper and Row, 1968.

Kraus, Robert. Littlest Rabbit. New York: Harper and Row, 1961.

Lopshire, Robert. I Am Better Than You. New York: Harper and Row, 1968.

Morton, Robert. Modern Mathematics Through Discovery - Book One. Morristown, NJ, Silver Burdett Co., 1970.

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__________ Pennsylvania Career Development Guide. Harrisburg, PA: Dept. of Education, 1974.

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Multimedia

Career Corps Slide Set. W.W. Evans Elementary School, Bloomsburg, PA; IU #16.

Compulearn. Pittsburg, PA: Compulearn, Inc.

Concept cards, Community Helpers Activities (carpenter, plumber, supermarket, waitress, druggist, moving man, shoe repairman, baker, tree surgeion, telephone operator, policeman, Newsboy, Ice Cream Man, Barber, Fireman, Postman, Farmer, Milkman, Gas station man, Zoo Keeper.)

Dillons Florists. W.W. Evans Elementary School, Bloomsburg, PA, 8mm film; IU #16

Flannel Board sets, Instructo Co.
#277 Balanced Meals
#246 Enlarged US Coins
#286 Seasons
#262 Plants and Foods
#147 The Community

Game: Fox the Cashier

SVE Picture Story Print Sets. Singer Visual Educational Co.
(Community Helpers, Marketing and Distribution, Consumer and Homemaking, The Family.)

V. Evaluation

A. Evaluation of student achievement of stated objectives:
Please indicate yes (Y), no (N), or not applicable (NA) for items.
Be sure to include any pertinent explanations in comments column.

(1) Objectives (B) Behavioral Objective No.	Was it taught?	Was criterion met?	Was criterion realistic?	Is it re-usable?	Was it worth the time?	COMMENTS
1.	Y	Y	Y	Y	Y	It was worth the time but if you notice, I not extended the unit time from April 1 to June 7; I could not have finished this unit!
2.	Y	Y	Y	Y	Y	This had to be oral in many cases but criterion was met.
3.	Y	Y	Y	Y	Y	This was a lot of fun!
4.	Y	Y	N	Y	Y	Several children did not have the ability to complete this objective.
5.	Y	Y	Y	Y	Y	Good B.O.
6.	Y	Y	Y	Y	Y	Yes, this was worth the time, but had I not used Junior Aides from BSC I couldn't have done this.
7.	Y	Y	Y	Y	Y	They loved this! I saved some riddles because they were so cute.
8.	Y	Y	Y	Y	Y	Because of the wide range of art ability this left something to be desired.
9.	Y	Y	Y	Y	Y	Some children did not have the ability to do B.O.'s without help. (1-10)
10.	Y	N	N	N	N	I had infinite difficulty getting copies of these pictures.

V. Evaluation

A. Evaluation of student achievement of stated objectives:
Please indicate yes (Y), no (N), or not applicable (NA) for items.
Be sure to include any pertinent explanations in comments column.

(I) Objectives (B) Behavioral Objective No.	Was it taught?	Was criterion met?	Was criterion realistic?	Is it re-usable?	Was it worth the time?	COMMENTS
11.	Y	Y	Y	Y	Y	Magic Circle was important to me before Career Education and will always be important because of the affective domain and its importance.
12.	Y	Y	Y	Y	Y	This B.O. was particularly good because the children all met the criterion.
13.	Y	Y	Y (N)	Y	Y	Many children do not have the ability to do decide(make the value judgment) which items to buy. Not for This Year's Class
14.	N	N	N	N	N	Not applicable because I couldn't arrange a field trip to a small store. We went to Nichol's Discount City instead.
15.	Y	N	N	N	N	This B.O. was too far advanced for first graders.
16.	Y	Y	Y	Y	Y	This was a good because I had a great class that loved to role-play!
17.	N	N	N	N	N	I didn't have the video-tapes.
18.	Y	Y	Y	Y	Y	Every child did this.
19.	Y	N	N	N	N	The individual work wasn't that good.
20.	Y	Y	Y	Y	Y	This BO was worth the time because this is a math skill that needs to be taught!

V. Evaluation

A. Evaluation of student achievement of stated objectives:
Please indicate yes (Y), no (N), or not applicable (NA) for items.
Be sure to include any pertinent explanations in comments column.

(A) Objectives (B) Behavioral Objective No.	Was it taught?	Was criterion met?	Was criterion realistic?	Is it re-usable?	Was it worth the time?	COMMENTS
21.	Y	Y	Y	Y	Y	The pre - post test has to be tremendous! The kids learn! Maybe because they are looking for infor.
22.	N	N	N	N	N	We didn't go to a small store. It wasn't possible to arrange. We did go to Valley Distribution and Storage Company though.
23.	N	N	N	N	N	I arranged a field trip to Nichols Discount City. A new store in our community.
24.	O	M	I	T E	D	
25.	Y	Y	Y	Y	Y	Mrs. Lehr was tremendous! The students really learned alot by her Food Dollar presentation.
26.	Y	N	Y	Y	Y	It's my ego showing but because of the slides and the Multi media Show i.e. the video tapes--parents (the public) was really enthusiastic.
27.	Y	Y	Y	Y	Y	The only criterion, the adoption of the kindergarten class with the filling station was not met--we took the Career Education Alphabet, instea

C. Thematic Unit Evaluation

Give a comprehensive evaluation of the following by specifically indicating strong points, weak points and recommended changes.

(I) Objectives

(A) Goals: My goals were good. But, first graders have limitation.

(II) Concepts: O.K.

(III) Subject matter: O.K. But maybe too hard for first grade.

1. How easily were you able to integrate the Career Education concepts into your curriculum as demonstrated by this unit? Easily.

2. What opportunities did you provide to allow input from your students, colleagues and community? What were the results of these inputs?

   I really pushed the resource directory.

3. Additional comments:

   Maybe I'm too enthusiastic, but I feel career ed. is the greatest thing that has happened in education!

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Motivational Activity #	Strong Points	Weak Points	Recommended Changes
1.	The motivational activity was great! Field trips really enthuse students. Many children have never seen educational T.V., a fruit farm, shopping centers, the police station, etc.	None	If possible, children should have the opportunity to see more careers. This summer's Voc Tec should help!
2.	The Career Corps was just great. The kids loved it, and related to it.	None	This summer, I am agumenting the Career EA Alphabet to include career, possibly at a high school level.

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Subject Matter Learning Activity	Strong Points	Weak Points	Recommended Changes
1.	This was a great activity to get the kids hooked.	None	The Career Corps was good. Kids want to be involved emotionally, physically, and intellectually.
2.	Great to see a real live role model as homemaker is good--because most don't		
3.	--		
4.	--		
5.	Mrs. Gloria Gearhart really good! Lesson on recycling program paper.	None	None
6.	Resource people enable student to consider just more than basic opportunities.	None	None
7.	Anna MacLehr did a fantastic job. The kids knew how to spend their food dollar by the end of the lesson.		
8.	O.K.		Children at my level (first grade) don't need this type of toutorred example.

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes. ...

Subject Matter Learning Activity	Strong Points	Weak Points	Recommended Changes
9.	--	--	--
10.	The kids did get the best price on chips and soda.	None	None
11.	This would be good for a child that has more awareness of careers, etc.		Too difficult for a first grade level.
12.	The field trip to a supermarket was good because they saw that goods i.e. meal, produce, must be processed.	None	More Time.
13.	The children saw the hundreds of items processed and liked the $100.00 of free gifts per class.	None	They could spend more time at Valley Distribution Company.
14. THIS WASN'T COMPLETED			
15.	Mr. Haggerty showed the license identification process.		
16.	Mr. Leighow was fantastic because he showed the children the fire truck and related to them at their own level	----	

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

	Strong Points	Weak Points	Recommended Changes
17.	This was a fantasti field trip because of consumer products and the public service career (policeman).	We didn't have the opportunity to do this because of Easter Vacation. We went to Dillons, Robbins Furniture and the police station instead.	
18.	First grades love to role play.	None	None
19.		---	----
20.	Good Activity.	Some children have limited art ability.	None
21.	This was done with Mrs. Anna Mae Lehr and the food dollar.	The children were to buy exactly $1.00 worth of food from the table.	Excellent lesson I plan to do this every year as a math skill.
22.	The children learned to comparitive shop, and price items.	--	--
23.	The children really related to role--playing well.	--	--
24.	We didn't build a filling station but rather gave our Career Education Alphabet.	--	---

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

	Strong Points	Weak Points	Recommended Changes
25.	(NOT COMPLETED DUE TO TIME ELEMENT)		
26.	These booklets were good. The more gifted children did a beautiful job.	The lower ability children didn't do nearly as well.	I would still do this, but have more individualized.
27.	Good for Self Image	--	None
28.	They liked this activity.	--	None
29.	This gave the children an opportunity to evaluate "self".	--	None
30.	Although we didn't go to BSC, we did creative dramatics in the classroom.		
31.	Once again, the children with ability did better than those with limited ability.		
32.	The kids loved the "hands-On" math with the computer.	None	I'll do this again at the end of the school term!
33.	WVIA TV/IN gave the kids a view of career related to the media.	None	None. Another activity we'll do again.

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

	Strong Points	Weak Points	Recommended Changes
34.	--	--	--
35.	I used teacher made games from my Media II CSIU course.	Didn't have enough games.	--
36.	The career ed alphabet was really good because the children identified with certain careers and wanted to know more about different careers.		
37.	This improved reading levels.	None	None
38.			
39.	Children learned about careers involved the school and developed more awareness.		
40.			
41.			
42.	This was good because everyone could do something that helped his self image.		
43.	The riddles were good. I saved some because they were so cute.	None	None

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

	Strong Points	Weak Points	Recommended Changes
44.	Those with art ability did best.	Those with-out didn't	None
45.	Booklets were good.	--	--
46.	Helped awareness of family jobs, etc.	--	--
47.	I was surprised how they picked pictures. It was an interesting study of individuals.		
48.	Kids liked this activity.		
49.	Good awareness activity. Some kids didn't know what their fathers did.		
50.	They liked this activity.		
51.	As part of the Social Studies program, they learned to make value judgments.		
52.	Magic Circle, as always was an important activity. They liked cues about career ed. "The Money Tree" was a good means of discussing the importance of family money planning.		

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

	Strong Points	Weak Points	Recommended Changes
53.	--		
54.	We did this along with the social studies curriculum.		
55.	They enjoyed money games; this one especially.		
56.	The field trip to the fruit farm was excellent to show the career of agri-business.		

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Correlating Activity #	Strong Points	Weak Points	Recommended Changes
Language Arts. 1.	Language Experience good approach to reading. Creative writing helps self expression. Spelling skills improved.		
Math 2.	(Money skills and consumer economics were good concepts to learn at any age.)		
3. Art	This unit has so many means for self expression. (Maybe I had too much art.)		
4. Health	They became aware of many careers related to health services.		
Physical Ed 5.	They had a new understanding of gym class.	--	None
Social Studies 6.	Career Ed was a natural for social studies. Many of the activities fit right in		
Science 7.	They were able to see how science is related to many career clusters.		

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Culminating Activities	Strong Points	Weak Points	Recommended Changes
1.	The multi-media show was good because parents could see the neat things, we had done with career ed.		
2.	The career corps alphabet will be used for many years to come.		
3.	Many resource people have become involved with career ed.		
4.	The Bloomsburg Fair Exhibit will be good public relations for career ed.		

CAREERS IN ENVIRONMENT - GRADE FOUR

INTRODUCTION:

Children in the fourth grade at Pine Elementary School have as their general theme in Social Studies the exploration, settlements, and building of our country by people from many European Countries. I have chosen to make career awareness as related to environment an integral part of one unit from this theme. It is hoped that by using this approach that the children will be made aware of the tremendous influence the environment has played in the development of our country. It is also hoped that the children will be made aware of, by studying this unit, careers available to them in the area of environment. Furthermore, emphasis will be placed on the concerns of career and economics as related to this unit of study.

I. Objectives

A. Goals

1. Children should gain a deeper understanding of and appreciation for:
    a. The nature and extent of some natural environmental resources in our country.
    b. How man has used and is using our natural resources to build our country.
    c. Why people have found it economically feasable to choose careers associated with certain natural resources.
    d. How needs for goods and services have caused people to settle in given areas.
2. Children will be led to realize that great cities grew because of specific environmental features such as good natural harbors, rivers and lakes for water transportation, good land transportation, and climate.

B. Behavioral Objectives

1. After viewing a film concerning the environment and natural resources of our country, each student will write in one sentence at least three ways natural environmental resources have been used in the building of their homes.
2. Given the materials and necessary instructions, students assigned to a committee will draw, to the satisfaction of the teacher, the outline map of the United States, using five symbols showing natural resources of the U.S. The students will draw them on their exact location as shown by World Book Encyclopedia.
3. Following the completion of a map of the United States showing where a number of natural resources are found, a committee of

students will compile a list of not less than twenty-five careers associated with those natural resources as determined by the Dictionary of Occupational Titles.

4. Students will choose from a list of twenty-five previously written careers dealing with natural environmental resources, one in which they may be interested. After receiving a checklist of essential requirements, they will then write an essay of not less than one page in length explaining why they chose that career, and describing where in the U.S. they may have to live in order to be employed in that career. This essay must meet certain requirements as determined by the teacher in the aforementioned checklist.
5. A committee of students will be asked to gather and mount on a bulletin board, at least ten pictures concerning various methods of transportation.
6. Given the opportunity to look at and discuss a previously constructed bulletin board concerning methods of transportation, students will record the names and locations of at least two cities which have grown up near to or because of the availability of certain natural sources of transportation.
7. Given the names and location of a selected list of cities in the United States, a committee of students will write their names of the map in the exact locations as determined by the teacher.
8. Using information found in World Book Encyclopedia, a committee of students will write a report dealing with the climate of the following areas in the United States: Northeastern, Southern, Midwestern, and Western. The report will be at least one page in length, and must be satisfactorily written

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as determined by the teacher.

9. Given the climate and location of the cities found in all parts of the United States, each student will prepare a short talk telling the city in which he may prefer to live and which career he would choose to follow while living in that city. Students should give at least two reasons for his choice of city and career.

10. Following a field trip to their local community and the surrounding area, each student will list at least five environmental factors for the location of the community. Each student will also write a list of five careers related to environment found in their community.

11. When given an opportunity at least five children will volunteer to act out individually their chosen career for the remainder of the class to guess what the career might be. A maxinum of five minutes per child will be allowed.

II. Concepts and/or Generalizations

1. Resourceful people from many lands have used the environmental resources of America to their advantage.
2. Man changes (adapts) his living to existing conditions.
3. Man influences his environment and is influenced by it.
4. Man lives in a continually changing world.
5. People have many kinds of careers.
6. Every individual can have a meaningful, rewarding career.
7. Changes and conditions in the world affect careers.

III. Subject Matter

A. Vocabulary terms:

1. impart
2. trades
3. raw materials

4. Manufacturing
5. industry
6. climate
7. temperature
8. weather
9. Levees
10. Delta
11. refinery
12. Jetty
13. river systems
14. Environment
15. natural resources
16. Economics
17. conservation
18. valleys
19. pass
20. location
21. sea level
22. inland waterway
23. upstream
24. plains
25. downstream
26. raw materials
27. by-products

B. Basic Academic Skills to be developed are:

1. Paragraph writing.

2. Language usage.

3. Map construction and visulization.

4. Proficiency in the use of reference materials.

5. Bulletin board construction.

C. Some of the careers related to environment as developed in this unit are:

1. Agri-Business and Natural Resources

    a. Farmer
    b. Meteorologist
    c. Natural Resource Manager
    d. Physicist
    e. Lumberman
    f. Oil worker
    g. Miner

2. Environment

    a. Biologists
    b. Engineering technicians
    c. Sanitation Workers
    d. Soil Scientists
    e. Conservationist

f. Environmental Laborer
g. Environmental Planner
h. Environmental Inspector

3. Transportation

a. Pilot
b. Truck Driver
c. Bus Driver
d. Ticket Agent
e. Aircraft Mechanic
f. Stewardess
g. Fuel Attendant
h. Sailor

D. Other Topics:

Anyone desiring additional information such as salary expected, training, etc. concerning careers related to environment should contact Career Educational Service, CSIU Box 213, Lewisburg, Pa.

IV. Student Learning Activities

A. Motivational Activities

1. Students will view a film concerning the environment of the U.S. prior to the beginning of the Unit.

2. Informative talks may be given by persons having environmental related occupations such as forest rangers, game protectors, etc.

B. Subject Matter Learning Activities

1. Discussions concerning the environment and related careers.

2. Drawing of maps concerning the location of natural resources and their related careers.

3. Formation of committees to compile information concerning natural resources and related careers.

4. Writing an essay telling about a possible career choice.

5. Gathering pictures which depict various forms of transportation, and which will be used in the construction of a bulletin board.

6. Writing an essay concerning the development of cities as related to an available natural source of transportation.

7. Writing the names of cities on a map of the U.S.
8. Writing a report describing the climate of designated areas in the U. S.
9. Orally discussing the choice of a city in which they might prefer to live.

C. Correlating Activities:

Although the unit is basically concerned with social studies, the following academic subjects have been correlated to varying degrees:

1. English - oral, written, and listening assignments.
2. Science - the study of climate.
3. Art - the making of maps, and the construction of bulletin boards.

D. Individual Study Activities:

1. Each student will write an essay concerning a possible choice of careers.
2. Each student will discuss a city in which they might prefer to live, and tell what career they might choose while living there.

E. Culminating Activity:

1. Students will examine their local community by personal observation and making note of the careers near their home. They will also be asked to note environmental features which led to the selection of the town site.

VI. Bibliography and Resource Materials:

Catalog of Instructional Films. Intermediate Unit #16, Lewisubrg, Penna., 1973, I. U. #16.

Cluster Resource Guide--*Environment.* Intermediate Unit #16, Lewisburg, Pennsylvania., 1973, I. U. #16.

Cluster Resource Guide--*Agri-Business and Natural Resources*. Intermediate Unit #16, Lewisburg, Pennsylvania., 1973, I. U. #16.

Cluster Resource Guide--*Transportation*.-- Intermediate Unit #16, Lewisburg, Pennsylvania., 1973, I. U. #16.

World Book Encyclopedia. Field Enterprises Educational Corporation: Chicago, Ill., 1971.

V. Evaluation

A. Evaluation of student achievement of stated objectives:
Please indicate yes (Y), no (N), or not applicable (NA) for items.
Be sure to include any pertinent explanations in comments column.

(1) Objectives (B) Behavioral Objective No.	Was it taught?	Was criterion met?	Was criterion realistic?	Is it re-usable?	Was it worth the time?	COMMENTS Unit Not Taught In Entirety
1.	Y	Y	Y	Y	Y	
2.	Y	Y	Y	Y	Y	It was necessary to use a source other than World Book. The text, "Your Country & Mine" was used.
3.	Y	Y	Y	Y	Y	
4.	Y	N	N	Y	Y	
5.	Y	Y	Y	Y	Y	
6.						
7.						

C. Thematic Unit Evaluation

Give a comprehensive evaluation of the following by specifically indicating strong points, weak points and recommended changes.

(I) Objectives

(A) Goals: The goals were met in varying degrees.

(II) Concepts:
Once again, many changes are needed to make the concepts presented more meaningful to the students.

(III) Subject matter:
The children were able to understand the vocabulary presented thus far. They were also able to effectively complete the projects assigned to them.

1. How easily were you able to integrate the Career Education concepts into your curriculum as demonstrated by this unit?
It really didn't suit the material I was presenting.

2. What opportunities did you provide to allow input from your students, colleagues and community? What were the results of these inputs?

This was a weak point in the unit.

3. Additional comments:

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Motivational Activity #	Strong Points	Weak Points	Recommended Changes
1.	The film was an interesting one which suited the purpose.		None

Subject Matter Learning Activity	Strong Points	Weak Points	Recommended Changes
1	The film was most appropriate and interesting.	The children had difficulty writing the uses of nat. resources in building their homes.	It would change this objective to -- ways natural resources are of value.
2.	It was an enjoyable learning experience for the class.	Sources other than World Book must be used to find the location of nat. resources.	It would be better to show just four resources rather than five.
3.	The children were able to select many more careers than 25.		None
4.	This was very much enjoyed by the children.	They found it difficult to write an entire page about their chosen career.	Change the criterion to 1/2 page and allow the children more than one choice of careers.
5.	The children completed this assignment quickly and seemed to enjoy the activity.		

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Correlating Activity #	Strong Points	Weak Points	Recommended Changes
1.	The class enjoyed the writing assignments.	They were unable to write a long assignment as I expected they would.	Shorten the required writing assignments.
2.		We were unable to effectively complete the assignment due to the end of the school year.	
3.	The maps and bulletin board were very well done. -- neat and accurate.		

Individual Study Activity #	Strong Points	Weak Points	Recommended Changes
1.	It was an enjoyable assignment.	It was difficult for them to write an entire page.	Shorten the assignment.

READING IN THE CONTENT AREAS THROUGH A STUDY OF TRANSPORTATION CAREERS - GRADE FOUR

INTRODUCTION:

Students who have reading handicaps are extremely difficult to motivate. These students must be excited about what they are doing in order to achieve success. This experimental study on Transportation will be completed with six fourth grade students. Most of these children have developed manipulative skills far better than reading skills. They are also competent at decision-making which will be used during this study; the concern of economics will also be emphasized. These two concerns of decision-making and economics are taken from the Pennsylvania Career Development Education Syllabus. An added inclusion of the cluster, Marketing and Distribution will be given special attention. Reading instruction will remain the important goal of this project.

I. Objectives

A. Goals

1. Students will recognize that the decision making process involves a series of increasingly restricted compromises between what he wants to do and what is actually available to him.
2. Students will be familiar with these basic economic concepts, i. e., specialization and division of labor for transportation in the community.
3. Students will read material in order to become familiar with the energy crisis and to understand the systems of transportation.

B. Behavioral Objectives

1. After a "Magic Circle" using the cue "Why I Should Behave," the students as a group will make a list of four or more rules for their expected behavior during the time we work together on this unit.
2. After defining what the word "careers" means, each student will tell the group at least one career one of their parents is in.
3. After discussing the careers that the students say their parents have, the children will tell the group one career that they would like to have.
4. After showing a transparency on transportation, which shows the symbol, defines the cluster, and lists jobs which fall into this cluster, each child will write the names of three occupations from the list that they would like to know more about.

5. After a sample scrapbook on transportation is shown and a discussion on what we would like to have in our scrapbook is finished, the group as a whole will bring in at least twenty pictures from magazines showing types of transportation and start a scrapbook with these. An assembly line will be set up to cut the pictures if there is a big response to bringing magazines in.
6. After instruction on how to write a story, each student will be required to write one story in class on a method of transportation and draw one picture to correspond with his story. These will be read to the whole group by each student and revised.
7. After instruction on types of transportation and sources of energy which are available but rarely taken advantage of and playing a transportation game, each student will list at least five ideas on how new methods of transportation can be derived from these other sources of energy.
8. After defining the transportation available in Bloomsburg, the students as a group will make a map of Bloomsburg. The map will show all of the main buildings and streets.
9. After making decisions on different kinds of transportation, which can be derived from other sources of energy, the students as a group will record those decisions that they make, and each student will identify at least one consequence and one personal risk involved through discussion.

10. After reading about the present energy crisis and discussion on the problems in transportation related to the energy crisis, the students as a group will discuss the implications of the energy crisis toward transportation for 30 minutes. Out of this discussion, the students as a group will develop a feeling of sympathy and need to conserve energy. This will be measured by a questionnaire of 4 items given to each student. Answering 3 out of these 4 questions in the positive manner, which shows a sympathy toward energy conservation, shows mastery.

11. Following the listing of new methods of Transportation which could be formed from new energy sources and the discussion on the implications the energy crisis toward transportation, the students as a group will design and construct a new system of transportation for Bloomsburg. The model will contain at least five new methods of transportation. The students will be given a checklist of six steps to be completed, according to class neatness already set up. All of these steps will be completed to obtain this objective.

II. Concepts and/or Generalizations

A. Students who have reading handicaps are difficult to motivate.

B. Students with reading disabilities need to be motivated in order to achieve and improve their reading skills.

C. There is a need for people to learn how to read.

D. Every individual can have a meaningful, rewarding career.

E. Every career Cluster has opportunities for people who have difficulties in reading. The Transportation cluster also has many job opportunities for people with reading handicaps.

F. Students with reading disabilities need great skill in decision-making.

G. Transportation is not only used for leisure but especially for a career.

H. Careers require different knowledge, abilities, and altitudes.

I. Changes and conditions in the world affect careers.

J. Every person is an individual, with different abilities, interests, needs, and values.

III. Subject Matter

A. Vocabulary terms to be defined:
   1. windmill
   2. irrigate
   3. valves
   4. pressure tank
   5. solar energy
   6. energy cells
   7. battery
   8. generator
   9. methane gas
   10. natural gas
   11. compact car
   12. compressed air
   13. barge
   14. delivery
   15. freight train
   16. passenger train

B. Basic academic skills to be developed:
   1. Reading
   2. Writing
   3. Listening
   4. Spelling
   5. Speaking
   6. Discussion
   7. Making a report

C. Careers related to the thematic unit grouped by Career Cluster
   1. Marketing and Distribution
      a. Dock Loader
      b. Warehouse Manager
      c. Clerk in a warehouse
      d. Trucking foreman
      e. Truck Manufacturer
      f. Salesman of Goods
      g. Advertising Agent
      h. Producer of Advertisements

2. Manufacturing
    a. Boilermaker
    b. Machinist
    c. Packager
    d. Tire vulcanizer
    e. Car Manufacturing
    f. Electronics
    g. Aircraft Manufacturing
    h. Aluminum Industry Workers
    i. Tool and Die Maker

3. Public Service
    a. Counselor
    b. Mail Carrier
    c. Mail Truck Driver
    d. State Highway Patrol
    e. Meter Reader
    f. Civil Engineers
    g. Water Treatment Plant Operator
    h. Coast Guard

4. Environment
    a. Life Scientists: Ecologists
    b. Environmental Laborers
        1. Power plant operator
        2. Recycling Operator
        3. Water or Sewer System Foreman
    c. Petroleum workers
    d. Civil Engineers
    e. Oceanographers
    f. Water Treatment Plant Operator
    g. Mining Foreman

IV. Student Learning Activities

A. Motivational activities. The following will be discussed:

1. Transportation available in Bloomsburg at the present time.

2. The sources of energy available.

3. The use of wind

    a. Windmill (pump - irrigation)

    b. Barge and sailboat possibilities for Marketing and Distribution

    c. Hydraulic Ram - System of values and pressure tanker

4. The Use of Solar Energy

    a. Homes or Business heating possibilities

        1. Generator Similarity

5. Methane gas (manure)

6. Compact cars

7. Compressed air engine

8. Free bus transportation

9. Delivery by truck

10. Trains (Freight and passenger)

The Language Experience Approach will be used to assess what the students already know about the subject and how they feel about it. This will be tape recorded.

B. Subject Matter Learning Activities

1. The students and teacher working together will draw a map of Bloomsburg on a very large sheet of paper. Be sure to include the river, the airport, the main highways, railroads, bus stations, and the major streets.

   Cut out pictures pertaining to Transportation; cars, busses, airplanes, trains, trucks, and boats. Glue these pictures in the approximate location on the map. This will be placed on the bulletin board.

2. Experience charts will be made about different kinds of Transportation and energy concerns.

3. The groups will make written reports from the information they gain through reading and listening.

4. The Game of Transportation will be played (See Appendix A.) This will show how goods are marketed, then distributed with the cooperation of transportation, all eight children will play.

C. Correlating Activities

1. Each student will make a list of the vocabulary words to be defined, which will be placed in their vocabulary notebooks.
2. The students will use the vocabulary words as spelling words.
3. Listening skills will be applied throughout the unit as the group works together. This will be done with the use of the "Magic Circle" (H.D.P.), by listening to each other when we talk and discuss things during the unit; and by reading and listening while being read to evaluated by comprehension checks.
4. Stories about transportation will be read.
5. Instruction on writing reports will be given.

D. Individual Study Activities

1. The children will choose one of the following writing activities:
    a. Write a short poem about your favorite transportation worker or your favorite means of transportation. Illustrate it. Read the poems to each other, then place them into a scrapbook.
    b. Write a short story about their opinions on how the energy crisis affects certain means of transportation. Illustrate it and place it in a scrapbook after reading it to the rest of the groups.
2. Spelling words from the vocabulary list will be given to the students. The more accelerated students will be required to learn 5 each week. The slow students will learn 2 each week.
3. The more difficult material will be read by the more accelerated students.
4. The students with reading handicaps will be in charge of reading the experience charts

E. Culminating Activities

1. The tape recording will be played back to students to show them how their attitudes have changed and what they have learned
2. The students will present their transportation system, reports, and initial map to their regular language arts class.

IV. Bibliography and Resource Materials

Air Line Employees Association, Chicago, Ill., Brochure.

Air Line Pilots Association, Washington, D.C., Brochure.

Aviation Career Guides. General Aviation Manufacturers Association, Washington, D.C., Brochure.

Careers. Ford Educational Affairs Dept. Dearborn, Michigan, Brochure.

Careers in Transportation. American Trucking Association, Inc., Washington, D.C., Brochure.

Holloway, Ruth Love and Stowe, Elaine H. Transportation. Field Educational Publications, Inc. 1973.

Human Side of Railroading. Association of American Railroads, Washington, D.C., Brochure

National Association of Motor Bus Drivers, Washington, D.C., Brochure.

Solar Energy. National Geographic. 1973

You and United. United Air Lines, Jamaica, N.Y., Brochure.

Your Career with the Airlines. Air Transport Association of America, Washington, D.C., Brochure.

Multi-Media

Cluster Resource Guide--Transportation, Intermediate Unit #16, Lewisburg, Pa., 1972; I.U. #16.

Comic Book--Marketing and Distribution. King Features, Inc., New York. I.U. #16.

Comic Book--Transportation. Intermediate Unit #16, Lewisburg, Pa., 1973, I.U. #16.

APPENDIX A

The Game of Transportation

2-4 Players

Each player spins the dial, the one with the highest number moves first and goes by truck to Scranton. The next highest goes by airplane to Philadelphia, the next by railroad to Harrisburg, the lowest by boat to Wilkes-Barre.

START - Each player starts on the dock. The player going to Scranton begins spinning. He moves the number of spaces shown on the spinner.

BUMPING - Any time you land on a spot occupied by another player, he must go back to the dock. You can only bump on the first 7 spaces.

DISASTER - There are 7 Disaster Blocks on each route. If you land on one, draw a Disaster Card from the stack and follow the direction.

FREE - There are 5 free spaces on each route. They are used only when 5-8 are playing. You may not bump a player on a Free Space.

OBJECTIVE - To deliver your freight to your city first.

4-8 Players

The same rules apply except that two players may go to the destination and you may bump anyone during the entire game.

Make sure the Disaster Cards (D.C.) are separated according to the various means of transportation:

1. BOAT LINES
2. AIR LINES
3. RAILROADS
4. TRUCK LINES

LEARNING ABOUT DECISION MAKING AND SELF
WHILE PRODUCING A TV COMMERICAL - GRADE FIVE

INTRODUCTION:

Two of the concerns of the Pennsylvania State Career Development Education Model which have not been included in many career information programs are "self" and "decision-making." This TRACE concentrates on attitudes concerning these two areas while studying an aspect of the career cluster "Marketing and Distribution." Within this cluster careers in advertising will be investigated and students will produce a television commercial. The commercial will advertise the product of a business which the class previously established.

I. Objectives

A. Goals

1. Students will direct and produce a television commercial for use in their school.
2. Students will participate in decision making activities and will discuss the processes involved.
3. Students will participate in self-awareness activities and will perform tasks based on their perception.

B. Behavioral Objectives

1. After having identified their interests and the qualities required for various jobs involved in the production of a TV Commercial, a randomly-selected half of the fifth grade class will state a career in this field which involves at least one of the traits they have identified in themselves.
2. After having completed Objective #1, this group of students will role-play a "happy" worker and an "unhappy" worker on the same job.
3. After having listened to or read a story about workers in an advertising agency, at least 3 members of the group of students will voluntarily state a different way in which the characters demonstrate sensitivity to others as human beings.
4. After having listened to or read a story about workers in an advertising agency, at least 3 members of the group of students will state a different prejudiced attitude and will state one example of how prejudice affects the behavior of the individual involved.
5. After having hypothesized a situation where the feelings of advertising workers come into conflict, each student will suggest

with a brief written statement at least two ways to solve or resolve the conflict.

6. Having completed behavior Objective #6, the group of students will tell their ideas to each other following the rules of The Human Development Program, i.e., anyone wanting a turn may have it but you don"t need to take a turn, and you must listen to each other.
7. After a half hour discussion of the production of TV commercials, the group of students will decide on the content of their TV commercial. The decisions about content will be accepted when more than half the students agree on an Item.
8. Upon the completion of Objective #7, and activity leader's listing on the blackboard the decisions made, the group of students will raise their hands to show if their individual decisions were influenced more, by self, peers', or parents' opinion.
9. After completing Objectives 1 - 7, the group of students will produce and direct their own TV commercial about their class' previously established business with each student performing the job he chose in the manner described in Behavioral Objective #1. The video-taped commercial must be acceptable for showing to others as determined by the teacher.
10. Following instruction in the use of the Finney Publishing Co's. booklets, Occupational Guidance, each member of the group of students will read the brief relating to the task he/she has performed in producing the commercial. Each student will tell the other group members the educational requirements, salary range, and at least one positive and one negative aspect of the job.

11. Upon completion of behavioral Objectives #1-10, the group of students will meet to decide how to present the TV Commercial to the rest of the school. The decisions about the presentation will be final when half the students agree by show of hands on a particular aspect of the presentation.

12. Upon completion of Behavioral Objective #11, the group of students will show the TV Commercial to the other students in the school. The showing will be considered completed when the group has shown the video-tape to each class from K to 5.

13. After completing Behavioral Objectives 1-12, the group will listen to a guest speaker, view a film, and listen to stories, all of which relate to actual jobs in the TV Advertising industry. Fifty percent of the students will be able to state a new term heard in one of the presentations and state one aspect of a TV Advertising career they had not known before.

II. Concepts

A. People have many kinds of careers.

B. Every individual can have a meaningful and rewarding career.

C. Careers require different knowledge, abilities, and attitudes.

D. Every person is an individual with different abilities, interests, needs, and values.

E. A person may be suited for several different careers.

F. A person's relationships with other people, with his employer, and with society affect his/her own career as well as the careers of others.

G. Man buys goods to satisfy needs and wants.

H. The choice of a career usually involves a compromise between greater and lesser needs.

1. Work experience facilitates career decision-making.

III. Subject Matter

A. Vocabulary

1. Video-Tape
2. Tripod
3. Deck
4. VU Meter
5. Pan
6. Focus
7. Zoom
8. Producer
9. Director
10. Script
11. Editor
12. insensitive
13. prejudice
14. camera
15. needs
16. yawes
17. attitudes

B. Basic Skills to be Developed

1. Listenings, as encouraged by following the rules of the Human Development Program and by regulating students to listen to stories, films, or speakers in order to meet the criteria for behavioral objectives # 3, 4, and 13.

2. Oral communication, as required to meet the criteria for Behavioral Objectives # 3, 4, 6, 10, 13, and as required for the actors to be understood.

3. Reading, as required to obtain occupational information relating to each student's chosen job.

4. Writing, as required to express ideas for Behavioral Objective #5, and as required by the writer to write the script.

5. Math, as a correlating activity. (See correlating activities.)

C. Some of the Careers Related:

1. Fine Art and Humanities

   a. Artist
   b. Designer
   c. Photographer
   d. Cameraman

e. Music Composer
f. Copy writer
g. Script Writer
h. Singer
i. Musician
j. Actor
k. Stage Director

2. Marketing and Distribution

a. Advertising Account Executive
b. Salesmen (for product being advertised)
c. Commercial Artist
d. Writer
e. Editor
f. Interviewer (people Interviewed)
g. Billboard painter
h. Purchasing Agent
i. Secretary
j. Typist

3. Communications and Media

a. Cameraman
b. Assistant Cameraman
c. TV Producer
d. TV Station Manager
e. Radio Announcer
f. Sound Mixer
g. Sound Engineer
h. Scientist
i. Dark Room Technician
j. Sound Effects Librarian
k. Film Editor
l. Script girl

IV. Student Learning Activities

A. Motivational Activities

1. Discuss the success of advertising in selling product.

2. Discuss the class'business which they have recently established and tell the class that they will have the opportunity to work cooperatively to produce their own TV Commercial. Assign the group the task of watching 3 TV Commercials and timing them to determine their length.

B. Subject Learning Activities

1. Students will list the various workers required to make a TV

Commercial. The group leader will explain the importance of self-understanding in choosing a job. Students will then list 20 things they like to do. Following these two activities the group will decide which students will perform the various jobs by matching their personal qualities with the qualities required for the job.

2. Students will role play a "happy" and then an "unhappy" worker performing their job. Several students whose jobs are naturally related will perform at the same time.
3. The group leader will write a brief story about several workers in an advertising agency who are sensitive to others. The leader will then read the story to students who choose to be read to and give the story to those who choose to read silently. Students will then list 3 ways in which the workers were sensitive to others as human beings.
4. Following the same procedure as in #3 but using a story which includes prejudiced, insensitive people, students will list 3 examples of prejudice. They will then either write about or speak about the ways this prejudice affected the people involved.
5. Students will practice problem solving by solving a hypothetical conflict situation.
6. Students will decide on the content of the class' own commercial and setting standards for the script writers. Students will then analyze the decisions they made to clarify for themselves if they decided because of their own opinions, the opinions of their peers or of their parents.
7. Students will each perform their chosen role for the production during class time - for example, cameraman and technicians will

practice, writers will write, etc.

8. Students will film the commercial. Those who are not involved in the actual filming will observe.
9. Students will view their production, will criticize and edit, if possible.
10. Students will research occupational information pertaining to his/her job in the production completely and will orally report to the rest of the group.
11. Students will view the film "Is a Career in TV for You?"
12. Students will listen to a guest speaker who has had experience in TV advertising tell about his/her career and will view samples of TV advertisements the guest has helped to make.
13. Students will listen to leader read selections from Down the Tube, a book containing humorous examples of commercials that failed.

C. Correlating Activities

1. Students will compile a list of vocabulary words which they will define and place in their vocabulary notebooks.
2. Instruction on the use of video tape equipment will be given and students will practice using this equipment.
3. In math class students solve problems dealing with the relationship of the number of feet of film and the viewing time.

D. Individual Study Activities

1. Accelerated students will develop a critical analysis of TV Commercials they have seen.
2. Slower students will make posters illustrating other kinds of commercials they have seen. Magazine pictures will be a major part of this and students will be encouraged to be critical of the commercials, i.e., be encouraged to pick example

of good and bad commercials and explain their feelings about them.

3. Slower students will tape record themselves doing examples of other commercials available.
4. Middle students will make a transparency of advertisements seen on billboards.
5. Students will write stories about their reaction and/or their parents' reaction after seeing a particular advertisement.

E. Culminating Activity

1. Students will show their TV commercial to other classes in their school.

VI. Bibliography and Resource Materials

Cluster Resource Guide--Communications and Media, Intermediate Unit #16, Lewisburg, Pennsylvania, 1973. I. U. #16.

"Fine Arts and Humanities," Career Education Services, C. S. I. U., Lewisburg, Pennsylvania.

"Marketing and Distribution," Career Education Services, C.S.I.U, Lewisburg, Pennsylvania.

Galamoy, Terry, Down the Tube. Chicago, Ill., Henry Geenerary Co., 1970.

"Is a Career in Radio or Television for You?" Color, AIMS Instructional Media Services. Hollywood, California. 1972.

Occupational Guidance, The Finney Co., Minneapolis, 1971.

V. Evaluation

A. Evaluation of student achievement of stated objectives:
Please indicate yes (Y), no (N), or not applicable (NA) for items.
Be sure to include any pertinent explanations in comments column.

(I) Objectives (B) Behavioral Objective No.	Was it taught?	Was criterion met?	Was criterion realistic?	Is it re-usable?	Was it worth the time?	COMMENTS
1.	Yes	Yes	Yes	Yes	Yes	Class was anxious to get this business over-with, and get on to what they considered the "real thing" (actual production).
2.	Yes	Yes	Yes	Yes	Yes	Lead to some good discussion. This class had never had HDP--I would like to be able to compare with a class which did.
3.	No					These objectives were postponed until the end because the class was becoming very frustrated with wanting to get to work on their project.
4.	No					
5.	No					Then we could not do them because of demands on both the teacher's schedule and on mine. I think I should have given them a try at the scheduled time anyway.
6.	Yes	Yes	Yes	Yes	Yes	But, we related it to Behav. Obj. #2, not #5.
7.	Yes	Yes	Yes	Yes	Yes	Some of the usual class leaders were not so happy with this process but some of the more retiring kids really got to speak up. In general, the class seemed frustrated with having to decide. They wanted me to do it.
8.	Yes	Yes	Yes	Yes	Yes	Results were interesting--basic decisions of style--comic vs. serious, musical vs. non-musical were largely their own and familys. Actual content was family's and peers -- they truly tried to cater to their audience.

V. Evaluation

A. Evaluation of student achievement of stated objectives:
Please indicate yes (Y), no (N), or not applicable (NA) for items.
Be sure to include any pertinent explanations in comments column.

(1) Objectives (B) Behavioral Objective No.	Was it taught?	Was criterion met?	Was criterion realistic?	Is it re-usable?	Was it worth the time?	COMMENTS
9.	Yes	Yes	Yes	Yes	Yes	
10.	Yes	Yes	Yes	Yes	Yes	
11.	Yes	Yes	Yes	Yes	Yes	Again--They wanted me to decide how it should be done.
12.	Yes	Yes	Yes	Yes	Yes	
13.	Partially					The only part actually carried out was hearing a guest speaker. The class was very responsive, had loads of questions. The rest we could not do because of time schedules and the lack of AV materials for this age level. Forgot something also read stories of 'goofs" in TV commercials and talked about roles people played, vocab. terms, etc. This was good.

C. Thematic Unit Evaluation

Give a comprehensive evaluation of the following by specifically indicating strong points, weak points and recommended changes.

(I) Objectives

(A) Goals: I think all goals were O.K. in the sense they were realistic. I think the one of students participating in decision making is so important and it was obvious that much more of this is needed.

(II) Concepts:

I'm not sure we did an adequate job with B, G, H. I think G could be eliminated.

(III) Subject matter:

#16 on vocabulary should be "Values". I think the subject matter was adequate considering my role as an "outside person." If the classroom teacher were to complete this unit, I think there could be more emphasis on subject matter.

1. How easily were you able to integrate the Career Education concepts into your curriculum as demonstrated by this unit?

Not relevant -- as a counselor, I don't have a curriculum of my own.

2. What opportunities did you provide to allow input from your students, colleagues and community? What were the results of these inputs?

The students showed their product to every class in the school, so I got a chance to talk with many teachers about it. Many had favorable comments, not only about the activity but many of the teachers of the lower grades were pleased at the opportunity for their students to be with older students in a situation other than free play at recess time.

3. Additional comments:

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Motivational Activity #	Strong Points	Weak Points	Recommended Changes
1.	Every student has had roughly equal experience in this area. (TV watching)	Tends to lead discussion like "you know the one about".	None
2.		They really liked doing this--were amazed at the shortness of the actual commericals.	None

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Subject Matter Learning Activity #	Strong Points	Weak Points	Recommended Changes
1.	The students were very kind to each other while doing this activity.		None
2.	Gave everybody a chance to "feel" their role and ask questions about it		None
3. Wish	I'd been able to do	this activity.	
4.	Wish I'd been able	to do this activity.	

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Subject Matter Learning Activity #	Strong Points	Weak Points	Recommended Changes
5.	-----		
6.	Shifted decision making from teacher to students. I think this should happen more.		Kids felt frustrated--wanted to get down to business on the actual commercial.
7.		Some kids were bored because time involved for each role wasn't the same.	
8.	What fun!	Observers were noisey--director asked them to leave after several "takes" of film.	

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

ject Matter rning Activity #	Strong Points	Weak Points	Recommended Changes
9.	O.K. Activity.		
10.	O.K. Activity. They preferred action to research.		
11.	Did not do this.		
12.	O.K.		

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

orrelating ctivity #	Strong Points	Weak Points	Recommended Changes
1.	Did not do.		
2.	O.K. No Changes.		
3.	Did not do.		

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Individual Study Activity #	Strong Points	Weak Points	Recommended Changes
1.	Did not do any of these because of lack of time. If we could have moved more slowly and if I had planned better, these would have helped to keep everyone busy when the preparation required for one job was more time--consuming than for the others.		

minating Activity #	Strong Points	Weak Points	Recommended Changes
1.	The students got real pleasure from showing their film.		

SOLAR SYSTEM - GRADES FOUR, FIVE AND SIX

INTRODUCTION:

The purpose of this unit of study is to demonstrate that the solar system is very much a part of everyone's life. Study of the solar system is an ever-changing study of facts, theories and ideas. The solar system effects us through the seasons, tides and other scientific ways, but, studying the solar system can effect us in the way we might use our leisure time, or the direction of our career choice. By becoming familiar with and studying specific problems in the study of astronomy and space, the student will develop an interest in and an appreciation for scientific developments, careers, and even leisure activities related to this study. Opportunities for careers or hobbies involving this study will develop, which the student may never have considered, thus developing their attitude that many job opportunities are involved around areas in which they hold interests. Emphasis will be put on the concerns of careers and leisure time from the Pennsylvania Career Education Development Syllabus throughout this unit.

I. Objectives

A. Goals

1. The student will realize that our scientific knowledge is always changing because of new discoveries, theories, and ideas.
2. The student will realize that having an interest in a particular subject can give him many ideas for future careers related to this interest which will give him a meaningful and interesting future.
3. The student will become familiar with the size of our solar system and the positioning of the bodies within the solar system.
4. The student will be able to relate the effects of the solar system to his daily life. (tides, energy, etc.)
5. The student will appreciate astronomy as a leisure activity.
6. The student will understand the heirarchy of the universe; planet, solar system, galaxy, and universe.
7. The student will become familiar with the many careers directly and indirectly related to the study of astronomy and the solar system.
8. The student will become familiar with the sun as a source of energy.
9. The student will be able to identify and appreciate star patterns in the sky.
10. The student will realize that we are not the center of the universe but merely a small part of the solar system.
11. The student will realize that time, the seasons, and day and night are caused by the earth's rotation and orbit.
12. The student will be able to work within the framework of a group without name-calling, fooling, or lack of cooperation.

13. The student will demonstrate pleasure in learning through the means of projects and research.

B. Behavioral Objectives:

1. After study of the solar system and participating in construction activities, each student will display his planet mobile, box planetarium or planet models which will then be evaluated by being recognizable in proportion and positioning in accordance with the solar system chart and checklist given previously.
2. After studying the constellations, the student will match drawn constellations to their appropriate names with 80% accuracy.
3. After experimentation concerning the laws of gravity and motion, each student individually will derive the direct relationship between these laws and the earth's orbit, until correctly explained to the teacher.
4. After studying the solar system for a few weeks each child will be required to write four questions (that he does not have answers for) to ask the planetarium operator about his job.
5. After studying astrology and the job of the astrologist, each child will be able to name his own astrological sign, five characteristics of this sign, and draw a recognizable picture of his sign's symbol.
6. After activities showing astronomy and astrology as leisure activities, each child will list and explain five reasons why astronomy is a valuable and meaningful hobby.
7. After studying astronomy as a hobby, each child will write a paragraph to his best language ability as determined by the teacher, about how he would go about starting this hobby for himself.

8. Given a solar energy kit the child will be able to manipulate the materials until energy is demonstrated.
9. After learning about the relationship of the solar system to the planet earth, each student will list and explain in one sentence each, at least five effects that the rest of the solar system has on the earth's environment. These papers will be judged on the "reasonableness" of the reason, as seen by the teacher, and for their 100% completeness (minimum - one sentence per reason).
10. After learning about solar energy, each child will write one sentence each on at least three ways that we discussed in which solar energy is used, and at least two ways that we had not previously discussed.
11. Given a model representing each of the planets in our solar system, the child will be able to arrange these in their order from the sun with 100% accuracy.
12. After study of the earth's rotation and orbit, the child will be able to explain in a written, 1/2 page paragraph the reasons for the seasons, and night and day, following the pattern of a checklist given with 80% accuracy.
13. Given a paper model, the child will define and demonstrate the terms waxing, waning, solar eclipse and lunar eclipse with 100% accuracy.
14. Given a list of vocabulary words and definitions related to astronomy each child will match these two lists with 85% accuracy.
15. After learning about the jobs of an astronomer, astronaut and rocket controller, the child will demonstrate good group techniques by his utilization of cooperation and self-discipline

rather than actions of name-calling, fighting and project destruction, while building a model. The model will be a recognizable and completely labeled model of the inside of the building or missle in which these people work.

16. After a study of the solar system, the child will be able to write a paragraph in a role-playing manner as to why he is a value to his society as an astronomer, space researcher or astronaut, and what he does in this job.
17. After studying astronomy as a hobby, each child will make a book of constellation diagrams and their names to begin their hobby with at least five correctly drawn and labeled constellations.

II. Concepts:

1. The sun is the center of the solar system.
2. All bodies attract each other with gravitational force.
3. A body in motion will move forever in a straight line with unchanging speed unless a force changes its motion. - Newton
4. Laws of gravity and motion result in orbit of earth.
5. The sun is a star.
6. The sun emits energy.
7. All planets move counterclock - wise.
8. Because of the earth's rotation we have day and night.
9. Because of the earth's orbit we have the seasons.
10. The moon is the earth's satellite.
11. Comets have an orbit.
12. Tides are effected by the moon and the earth's rotation.
13. The moon's phases are determined by the rotation of the earth and moon and the sun.
14. The speed of light is used to measure distances in space.

15. We can estimate distances, temperatures and composition of a body in the solar system by its color.

16. Constellations are sky pattern of stars.

17. The apparent nightly motion of the stars is due to the turning of the earth.

18. The apparent brightness of a star depends on its distance from the earth, its size and temperature.

19. Our sun is one of 100 billion stars in our Milky Way.

20. From what we know now, the astronomical hierarchy we live in is: planet, solar system, galaxy, universe.

21. Each year our knowledge of the universe increases.

22. Models and diagrams can be constructed to help one visualize a science concept.

23. Astronomy is a meaningful hobby or job opportunity.

24. Difference of opinion can arise when discussing things in science like astrology or life on other planets.

25. Every occupation contributes to society.

26. People often pursue careers based on hobbies or interests.

27. There are many careers related to our environment and also to the study of the solar system.

28. It often takes much patience and self-control to work within the framework of a small group.

29. For progress within a group, it is necessary to cooperate, contribute, control oneself and be patient.

III. Subject Matter

A. Vocabulary Terms to be Defined

1. Solar System
2. Planets:

    a. Mercury
    b. Venus
    c. Earth
    d. Mars
    e. Jupiter
    f. Saturn
    g. Uranus
    h. Neptune
    i. Pluto

3. orbit
4. Asteroids
5. Comets
6. Satellites
7. Sunspots
8. Corona
9. Solar Wind
10. fixed Stars
11. Revolution
12. Rotation
13. Surface Gravity
14. Gravity
15. Phases of Moon
16. waning
17. waxing
18. tides
19. Eclipses - solar, lunar
20. Light Year
21. Spectrum

    22. Milky Way
    23. Interstellar Space
    24. Universe
    25. Telescope
    26. Camera
    27. Spectroscope
    28. Space Probe

B. Basic Academic Skills to be Developed:

    1. Sequential ordering
    2. Scientific method (through experiments)
    3. Cooperation and contribution in groups
    4. Constructing models to approximate scale
    5. Scanning newspapers and reading materials
    6. Impromptu speaking
    7. Demonstrating-handling equipment while speaking
    8. Symbolism
    9. Indirect measurement
    10. Researching
    11. Collecting and compiling materials and data
    12. Diagramming
    13. Categorizing.
    14. Procedures used in panel discussion
    15. Interview skills
    16. Developing questions
    17. Model building (for work or leisure)
    18. Observing and describing observations
    19. Mathematical calculations

C. Careers related to the Thematic Unit grouped by Career Clusters.

1. Business and Office

    a. Computer operators
    b. Recorders
    c. Statisticians
    d. Research Writers
    e. Mathematicians
    f. Programmers

2. Construction

    a. Rocket and Missle Constructors
    b. Launch Pad Constructors
    c. Control Center Constructors
    d. Planetarium Constructors
    e. Greenhouse Construction

3. Environment

    a. Geologist
    b. Geophysicist
    c. Heat Researcher
    d. Soil Scientist
    e. Botanist
    f. Greenhouse Designing
    g. Oceanographer
    j. Assayer
    h. Geodist
    i. Spectroscope Analyser
    j. Repairman
    k. Physicist
    l. Electronic Technician
    m. Planet Researcher
    n. Electrical Engineer
    o. Telescope Operator

4. Manufacturing

    a. Telescope manufacturer and Designer
    b. Lens Makers
    c. Glass grinders
    d. Camera Manufacturer and Designer
    e. Spectrometer manufacturer and designer
    f. Computer manager and designer
    g. Radio manager and designer
    h. Antenna Manufacturer and designer
    i. Metal welders (for rockets)
    j. Metal Manager
    k. Radio telescope manufacturer and designer
    l. Instrument makers
    m. Optical mechanic

5. Communication and Media

    a. Cameramen

        b. Radio operators
        c. Radio wave receivers
        d. Authors
        e. Reporters
        f. Display workers

    6. Consumer and Homemaking

        a. Space clothing designer
        b. Space dieticians

    7. Fine Arts and Humanities

        a. Science fiction writers
        b. Astronomy Professor
        c. Science History Writers

    8. Hospitality and Recreation

        a. Planetarium show director
        b. Astrologer
        c. Astrology Writers

    9. Health

        a. Astronaut Training
        b. Physicians

    10. Public Service

        a. Government space research
        b. Government astronomy research
        c. Public Relations
        d. Personnel Manager

    11. Transportation

        a. Astronaut
        b. Aerospace engineer

D. Other topics

    1. Science fiction stories (writing and reading)

    2. Astrology and astrologists

    3. Environmental jobs, i.e.; geologists, geophysicists, assayers, soil scientists and geologists as an integral part of research of the moon.

    4. Interests develop hobbies which develop possible future careers.

    5. Use of leisure time.

    6. Manufacturing of astronomical and space equipment.

7. An astronomer's training.
8. Activities of cameramen, radio operators and radio-wave receivers who work in the area of space and astronomical study.
9. Research as a vital part of science.
10. Writers, researchers and reporters important in scientific work.
11. The importance of computer operators, recorders, statisticians, mathematicians and programmers in space and astronomical work.
12. The planetarium operator as a teacher and as a scientist.

IV. Student Learning Activities

(Note to reader:) Before confusion sets in, let me explain that not all these projects will be done by all of the class--nor by all of the students in a class. Through experience with my students I see a need for many different types of projects, so that I have some for groups, and individuals, (of all ability types), in order to meet individual needs.

A. Motivational Activities

1. Selecting a few children and reading their astrological (zodiac) characteristics with astrological materials around the room.
2. Give each child his height and moon weight on a card to begin discussion of this topic.
3. A pre-test and an unexplained viewing of our schooling planetarium.
4. Films
5. A talk by a man why has astronomy as a hobby and a demonstration of his telescope in the room.
6. A discussion of the requirements of an individual when working in a group followed by a chart made of the requirements we come up with.

B. Subject Matter Learning Activities

1. Activities related to planets.
2. Constructing individual planets using paper mache and bowls (as a mold) to be suspended from the ceiling in their order from the sun.
3. Constructing small planet mobiles from wire and construction paper.
4. Teacher will demonstrate the causes of day and night using a flashlight and bulb.
5. Teacher will demonstrate the earth's rotation and orbit using one child as a walking earth, one as the stationary sun and then adding in a student as the moon, in a physical moving representation.
6. Students will be shown a chart of bodies in the solar system and then directed to research materials in the classroom and library where they can find out more about these planets. Skimming and familiarizing of these books and materials will follow.
7. Activities related to environment: Group discussion on why what we know about our earth's environment aids us in understanding the moon, the solar system and life on other planets. (Discussion will be lead into a discussion on environmental jobs that are used in these ways.)
8. Group discussion on (a) solar energy as a possible solution to the energy crisis and (b) if you were a government official chosing people to develop means of using this source of energy, you would choose men of what different occupations?
9. Group (small) discussion on the importance of ecological and

and environmental jobs based on this statement--The amount of carbon dioxide in our air directly related to the amount of energy and light we get from the sun.

10. Write a science fiction story on life in a particular planet, or life on earth without the sun, based on facts that you do know about the earth and the rest of the solar system. These will be shared with the class.
11. Activities related to the sun: feel objects that are warmed by the sun and experience the difference in warmth in the sun and shade.
12. Give each of four groups black paper placed on corrugated cardboard (one lying flat and one on an angle) let children feel and compare these two in the sunlight at intervals of two minutes. Each group will then put thermometers under each paper and record an intervals of two minutes. Results of each group will be discussed with the entire class to craw conclusions.
13. Using a ruler and paper, mathmatically determine the size of the sun. (Freeman, 46)
14. Make a sundial and tell time using the sun(Freeman 16, Jackson 94)
15. Construct a solar heater (Jacobson 106)
16. Activities related to careers: The students will play the quiz show "What's my Line" using careers we discussed in our talks under "environmental activities" or those brought up by students during the unit. New careers in these areas will later be brought into focus by giving each member of the class a list of various jobs including the new ones to be discussed. The person telling his "line" will first read from a role-

playing card what his job is. During the course of the game students will try to determine his job using the list given.

17. Given a list of jobs related to the environment and the solar system, the student will be able to identify those jobs she could hold given a sixth grade education and explain in three sentences why he is not qualified for the other jobs in the list.
18. After watching a cameraman and an optomitrist (both related to environment and solar system jobs) the students will list the skills required by these jobs.
19. Following class discussion the student will individually select five of the occupations mentioned and for each will estimate on a scale of 1 to 10 the extent to which each of these astronomy-related jobs involves working with people, data and things. Their choices will be shared with the class.
20. Given a teacher-made crossword puzzle using the names of jobs discussed previously the students will be able to complete the puzzle.
21. After being divided into groups the students will act out a short skit involving "work in an astronomy research center or observatory."
22. Activities related to constellations: The students will make night sky-observations attempting to find those things listed on a check-list made by the class.
23. Some students will make a 3-D view of the stars (as done in Blough,ch.7)
24. In the daytime the teacher will take everyone outside and point out the section of sky in which particular planets will be seen with reference to the position of the moon. (Blough)

25. Each student will make a booklet of constellation patterns and their labels as a "Guide Book" to astronomy as a hobby.

26. Each child will make a simple chart of the location of these constellations, also for the use in a hobby.

27. Each student will give an impromptu speech on his favorite leisure activity.

28. Given a list of ten leisure activities related to the solar system (star gazing, telescope building, display making, astrology--plus others that do not fit) the student will circle with 80% accuracy all those leisure activities related to the solar system study. Reasons for choices will be discussed to the class.

29. A town man who is interested in astronomy as a hobby will come to class (or be recorded on tape) explaining his hobby to the class.

30. Activities related to other concepts: Observe shadows and record their length and position on a large sheet of paper at intervals during the day.

31. Lift items to feel the pull of gravity. Suspend a weight on a string to see the direction of gravity's pull.

32. Observe and record the moon's changes (daily) during the month.

33. Collect news clippings concerning news about planets, comets, moon exploration, and astronomical study and research.

34. Make up questions for a vocabulary quiz time (made by the students). Class may divide into teams and a class member could do the questioning.

35. The students will heat different metals to observe their colors and record their findings.

36. Some students will make a refracting telescope (jacobson 224 &260)

37. The students will observe a sun-powered bulb.

38. View picture and films (No way I'm naming them here) that will introduce and explain many of the concepts involved in the unit.

C. Correlating Activities

1. A man from Benton who has experience navigating by means of the stars will come to class or be taped talking about this aspect of the stars.

2. An experiment will be done to demonstrate and measure the greenhouse effect.(Jacobson, 91)

3. Students will clip out their horoscopes every night for a week and then discuss in small groups "astrology; Science or Recreation."

4. Students will examine almanacs and calendars which include the moon's phases.

5. Video tapes may be made of the classes working in their groups. This would be followed by an objective class discussion on group activities - responsibilities, co-operation, etc.

D. Individual Activities

1. Many of the projects listed under subject activities will be used individually, particularly for those who have completed other work and are interested in more.

2. Students who finish their projects early will act as assistants to those slower students in the class.

3. Students with questions and interests which can't be answered by myself or other students or that need expansion, will use our library, or write their questions to the Astronomical Society in Canada or places in the U.S.

4. Students who become interested in particular aspects of the unit - astronomy as a hobby, astrology, science fiction writing,

will share additional materials they find with the class.

5. Students having trouble reading words such as the constellation names will be assisted by other students.

E. Culminating activities:

1. The students will visit the planetarium in Harrisburg and (hopefully) ask the planetarium operator questions afterwards that they have previously written concerning his job.
2. A display of all models, projects, etc. , will be exhibited to my other science classes and also to the parents at a PTA meeting we were asked to participate in, with student volunteers explaining the projects.

E. Outline of Topics - 2-2 1/2 month project

1. Introduction of Unit on Solar System through Astrology (Study of the stars)
    a. Zodiac signs.
    b. Synopsis of each sign.
    c. Activities related (Zidoac postermaking).
    d. People whose life-work is studying stars.
2. The Stars
    a. What they are.
    b. Constellation patterns.
    c. Beginning constellation books.
    d. Work involved with studying stars - from telescope makers, viewers, on through astronomy.
3. The Sun
    a. What is it; what does it do, etc.
    b. Solar winds and other solar phenomena
    c. The sun as energy and people whose work involved developing

using this energy.

IV. The solar family - our solar system

- a. A look at all the planets and a mentioning of comets, meteors, etc.
- b. Orbits and revolutions.
- c. A look at studies made by people working on space solar exploration - satellite pictures, discoveries constantly being made about Jupitor, etc., and the men who make such studies or equipment needed for the studies.

V. Study of Each Planet

- a. In order from sun, mentioning but not discussing earth until later;
- b. The earth's Moon and its effects on earth.
- c. Solar and lunar eclipses, also moon's wanning and waxing.
- d. Jobs of Men who study effects of planets rotation, orbit, comets, etc. on the earth. (See careers related to unit for suggestion.)
- 3. Jobs related to study of the moon (geologists, geodists, astronauts, all people who build equipment and satellites (or rockets) for moon study.)

VI. Asteroids, comets and meteors;

- a. What each is;
- b. Where they are - how they travel.

VIII. Our Galaxy (The Milky Way)

IX. Our Universe

X. Other Universe's or Galaxies - Life on these

- a. Theories
- b. Science Fiction - people whose jobs are writing about the

VI. Bibliography and Resource Material

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Living in Space
Explaining the Solar System
Exploring the Universe
The Milky Way and the Universe

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Films

Asteroids, Comets and Meteors

Beyond our Solar System

Energy from the Sun

How we Know the Earth Moves

Measuring in Astronomy

Our Mr. Sun

Portrait of the Sun

Solar Family

Space Science, Comets, Met., Planetoids

Stars at Night

Walk on the Moon

V. Evaluation

A. Evaluation of student achievement of stated objectives:
Please indicate yes (Y), no (N), or not applicable (NA) for items.
Be sure to include any pertinent explanations in comments column.

(I) Objectives (B) Behavioral Objective No.	Was it taught?	Was criterion met?	Was criterion realistic?	Is it re-usable?	Was it worth the time?	COMMENTS
1.	Yes	Yes	Yes	Yes	Yes	
2.	Yes	Yes	Yes	Yes	Yes	Constellations were taught by use of "counstellation stations" - each one used a viewer or overhead plus tapes and made of each constellation. They then picked up a punched card to draw the const. on to make a constellation book.
3.	Attempted	No	No	See comment		Criteron was good and challenging for a few 6th graders. No to be used for extire classes or even a large number.
4.	Yes	Yes	Yes	Yes	Yes	
5.	Yes	Yes	Yes	Yes	Yes	Much fun even though he encountered poor parent response and critism. Worthwhile-I'd to it again.
6.	Yes	Yes	Yes	Yes	Yes	
7.	No	No	Yes but was changed	modified	Yes	Instead of a paper, oral class response was made by each student

(1) Objectives (B) Behavioral Objective No.	Was it taught?	Was criterion met?	Was criterion realistic?	Is it re-usable?	Was it worth the time?	COMMENTS
8.	Yes	Yes	Yes	Yes	Yes	Fun! but beware of fire!
9.	Yes	Yes	Yes	Yes	Yes	Very worthwhile-tied many things together
10.	Yes	see note	No	Yes	Yes	Change criteron to one way not previously discussed.
11.	Yes	Yes	Yes	Yes	Yes	Nothing spectacular
12.	Yes	Yes	Yes	Yes	Yes	
13.	No	No	NA	NA	NA	
14.	Yes	Yes	Yes	Yes	Yes	
15.	No	No	NA	NA	NA	Want to try this next time - did not naturally fit in at this time
16.	Yes	Yes	Yes	Yes	Yes	Interesting

C. Thematic Unit Evaluation

Give a comprehensive evaluation of the following by specifically indicating strong points, weak points and recommended changes.

(i) Objectives

(A) Goals:
Stress #2 - Strong pt. because kids just don't seem to realize this.
#8 - Very good for the time it was used-during every crisis.
#3 - This goal really can't be readied-I think positioning can be partially understood, but the concepts involved in #3 are over my head.

(II) Concepts:

Many can be added as unit progress omit #14 - difficult, for elementary
#24 - great! differences of opinion on astrology or planet life sure do occu

(III) Subject matter:

pretty standard

1. How easily were you able to integrate the Career Education concepts into your curriculum as demonstrated by this unit?

Very easily. Seemed to slip in many ways I had never considered that it would. Made the unit meaningful to many that way.

2. What opportunities did you provide to allow input from your students, colleagues and community? What were the results of these inputs?

Many student ideas were used and worked well.

3. Additional comments:

Book publishing and the jobs involved entered in when we published by hand our Science fiction stories.

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Motivational Activity #	Strong Points	Weak Points	Recommended Changes
1.	Really excited & motivated the kids	look out for diff. religious beliefs & be prepared to back up your reasons for using astrology as a a motivational activity	
2.	Exciting for the kids		
3.	worked well		
4.		Films did not actually play an important part in initial motivation, but did motivate throughout - particularly NASA movies on recent space flights - these were real pictures.	
5.		Never got him to come	
6.	Made them think good to have it displayed throughout time		
For motivation during study of an astronauts job and the jobs of other space people, I explained the tests that astronauts must take for entrance. Then we did one - place a bucket of snow in the room and a students stands in it in his bare feet for as long as he can. An astronaut must do this for seven minutes to pass.			

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Subject Matter Learning Activity	Strong Points	Weak Points	Recommended Changes
1.	Problem in final typing - #1 was a subtitle as was #7		
2.	Great!	Takes awhile to hang	
3.	Fun		planet map posters worked better. They enjoyed it more.
4.	Works	Dull	Still thinking
5.	Visual - really helps		
6.	Good-they really need additional library work	specifies to look for should be given	coordinate this with librarian
7.	Good	Takes awhile to get going	
8.	Really fun!		
9.	Pertinent		
10.	Fantastic	Build this into a book	
11.	Used senses	Worked well with 4th & 5th--not 6th	
12.	They really were surprised by this		

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Subject Matter Learning Activity	Strong Points	Weak Points	Recommended Changes
13.	Challenging	not for 4th or 5th	
14.	-----------	--------	Not used
15.	Fun! it cooked things too.		
16.	Enjoyable brought out many jobs		
17.	Made them think!		
18.	------------	------------	not used
19.	Good for discussion	subjective	
20.	Fun way to learn	Making the squares for a crossword puzzle!	
21.		Good in 5th only	
22.		Can't tell if they did it.	
23.	Easy all had fun		
24.		Only good for those with a good sense of direction	could be omitted

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Subject Matter Learning Ability #	Strong Points	Weak Points	Recommended Changes
25.	Fantastically motivating		Done through constellation stations
26.		Too difficult	Give them a chart
27.		Impossible with departmentalization to get through all	Break into group & have person tell others in group
28.	Good evaluation		
29.	------------- Couldn't get him.	-------------	--------------------
30.	Visual		Use chalk and the pole to the slide or swings which would probably be on macadam.
31.		For 4th good not for 5th & 6th	
32.		Too many cloudy nights when the unit was done!	
33.	Current should be done with all science studies		
34.	Fun	Kids that don't know answers may feel frustrated or embarrassed	

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Subject Matter Learning Activity#	Strong Points	Weak Points	Recommended Changes
35.		Know what your doing-	Some boys from the high school came and did this for us.
36.			
37.			Not completed
38.	Fun - They were amazed!		

Correlating Activity #	Strong Points	Weak Points	Recommended Changes
1.	Couldn't get line		
2.	Visual		
3.	Motivating	Watch religion-again	Make an optical assignment
4.	Good use of reference		
5.	Very revealing!	Getting them to forget camera took awhile	

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Individual Study Activity #	Strong Points	Weak Points	Recommended Changes
1.			
2.	Cooperation should be done with all subjects		
3.	Cooperation should be done with all subjects		
4.	Ego building		
5.	Cooperating atmosphere just great.		

Culminating Activity #	Strong Points	Weak Points	Recommended Changes
1			All Plans were made and city commissioner ordered plantonum closed until fire exits were repaired!
2.	Good for class and interested others in building		

TO ROME TO LEARN - GRADES FIVE - EIGHT

Introduction

The following career education thematic unit has been prepared for the use of parents of middle school (grades 5-8) children who desire to substitute an educational travel experience for regular classroom time. All six concerns (self, education, career, decision making, economics and leisure) of the Pennsylvania Department of Education Career Development Model have been included. An emphasis has been placed on the career cluster of Hospitality and Recreation. Pennsylvania's Goals of Quality Education numbers 2 and 8 are enhanced. This unit will serve as an experimental model in utilizing parentally supplied facilities and time to accomplish the facilitation of the learning process.

I. Objectives

A. Goals

1. Understanding and appreciation of persons belonging to social, cultural, and ethnic groups different from their own.
2. Understanding of opportunities open to them for preparing themselves for a productive life.
3. Increasing of social studies skills and knowledge.
4. Increasing of economic perceptions.
5. Increasing of self responsibility behaviors.
6. Enlarging of reading repetoires.
7. Acquisition of skill in language and monetory translations.

B. Behavioral Objectives

1. After the trip, each child given a globe with time zones indicated will translate Eastern Daylight Saving time with 90% accuracy to corresponding time of a given country within a 6-hour eastern zone of U.S.A. (Cog., Education, Goal 3)
2. After the trip each child will name 5 major cities of Italy and approximate their location on blank map of Italy. (Cog., Education, Goal 3)
3. After the trip each child will list at least 5 observed behaviors of Italian people that were different from U.S.A. citizen's behavior. (Cog., Decision making, Goal 1)
4. Given an opportunity to express his impressions of Italian people, each student will select from a list of adjectives six which describe in his opinion, the qualities of this group of people. (Aff., Decision-making, Goal 1)
5. If given an opportunity, each child will share observations of Italy willingly with classmates during a social studies class. (Aff., Decision-making, Goals 5 & 1)
6. After instruction on monetary exchange rate, each child will make at least one purchase of his choice with his own personal money with no shortage of payment. (Psych., Economics, Goals 4 & 7)
7. During the trip each child will taste at least 2 foods that are unfamiliar to him. (Psych., Self, Goals 1 & 5)
8. After the trip each child will describe orally at least 3 differences he observed in social behaviors of a religious sect contained within the tour group (Mennonites) from other members of the tour group. (Cog., Education, Goal 1)
9. After personal contact with tour staff, each child will identify at least 8 careers and their duties that are associated with the Hospitality and Recreation Career cluster. (Cog., Career, Goal 2)
10. After experiencing frustration with communications, each child will learn at least 10 Italian words that will enable minimum communication. (Aff., Decision making, Goal 5)

11. Throughout the trip each child will be responsible for his own personal clothing and belongings as measured by the absence of lost articles. (Aff., Self, Goal 5)
12. After touring the old sites of Rome, an appreciation for history will be displayed by at least 3 unsolicited requests for further information. (Cog., Leisure, Goal 3)
13. After deliberate instruction by parent, each child will cite at least one current educational opportunity available to them within the five years which involves foreign travel and/or study. (Cog., Education, Goal 2)
14. During the trip each child will enjoy the trip as a leisure time activity as measured by a minimum of two periods of laughter per day. (Aff., Leisure, Goal 2)
15. During the trip each child will read at least 10 hours, including a minimum of four books and/or articles at their level on Italy, measured by observance of parents. (Cog., Education, Goal 6)
16. After being engulfed in the metric system, each child will of necessity calculate at least 2 essential measurements with 95% accuracy. (Cog., Economics, Goal 7)
17. After a tour of Rome, each child will recognize paintings of at least three artists as measured by recognition at future playing of Parker Brothers' game "Masterpiece." (Cog., Education, Goal 3)
18. After participating in the making of all financial arrangements for the trip, each child will calculate approximately what portion of the trip they could have financed from personal savings. (Cog., Economic, Goal 4)

II. Concepts and/or Generalizations

1. Physical and cultural geography determines man's behavior.
2. Money = time.
3. Knowledge of options enhances wise decision making
4. Man is responsible for his behavior.

III. Subject Matter

A. Vocabulary Terms

Time Zones
lire
Mennonite
Catholic
gram

passport
Vatican
Roman
cultural
pasta

Italian Vocabulary
Names of Italian cities
Names of Italian artists & paintings

B. Basic Academic Skills to be Developed

1. Math--Metric & Monetary Translations
2. Social Studies--Map Reading Skills, Italian History
3. Reading--Vocabulary Words
4. Fine Arts--Art Knowledge

C. Careers Related to the Thematic Unit grouped by cluster

Hospitality & Recreation

- Tour Guide
- Translator
- Hotel Clerk
- Maid
- Bellboy
- Hostess

Transportation

- Pilot
- Stewardess
- Steward
- Airport Porter
- Airplane Mechanic
- Communication Operator
- Taxi Cab Driver
- Carozza Driver
- Parking Attendents

Public Service

- Prothonotary
- Immigration Officer
- Custom Inspector

Marketing & Distribution

- Souvenir Salesman
- Bankers

IV. Student Learning Activities

A. Motivational Activities
1. Application for a passport
2. Family planning sessions

B. Subject Matter Learning Activities
1. Participation in a "packaged" 8-day tour of Rome, Venice, Naples and other points of interest in Italy.

C. Correlating Activities
1. Family discussions

D. Individual Study Activities
1. Supplementary readings from the Britannica Jr. Encyclopedia will be assigned if mastery is not reached on objectives.

E. Culminating Activity
1. The family compiling and editing of slides taken during the excursion.

VI. Bibliography

Sasek, M. This is Rome. Macmillan Co.: New York, 1966.

____________, Holiday Italian Style, Pfiger Co. 1974

Encyclopedia Britannica
Encyclopedia Britannica Jr.
"Masterpiece"--Parker Brothers, 1973

V. Evaluation

A. Evaluation of student achievement of stated objectives:
Please indicate yes (Y), no (N), or not applicable (NA) for items.
Be sure to include any pertinent explanations in comments column.

(1) Objectives (B) Behavioral Objective No.	Was it taught?	Was criterion met?	Was criterion realistic?	Is it re-usable?	Was it worth the time?	COMMENTS
1.	Y	Y	Y	Y	Y	This opened up discussion of the international date line.
2.	Y	Y	Y	Y	Y	
3.	Y	N	N	N	Y	This forced kids into stereotyping that is undesirable.
4.	Y	Y	Y	Y	Y	Caution must be used against being an instant "expert."
5.	Y	Y	Y	Y	Y	This was an excellent reinforcement activity.
6.	Y	Y	Y	Y	Y	Difficulty was encountered due to daily change in rate of exchange.
7.	Y	Y	Y	Y	Y	Criterion could have been as high as 10. Evaluation should include not spitting out.
8.	Y	N	N	N	N	Differences were not that obvious.
9.	Y	Y	Y	Y	Y	
10.	Y	Y	Y	Y	Y	There was little need for using Italian and no frustration.
11.	Y	N	Y	Y	Y	A few minor things got lost.
12.	Y	Y	Y	Y	Y	Criterion could be higher.
13.	Y	N	Y	Y	Y	Fine with 8th grade pupils but not very interesting to 5th grade pupils.

(1) Objectives (B) Behavioral Objective No.	Was it taught?	Was criterion met?	Was criterion realistic?	Is it re-usable?	Was it worth the time?	COMMENTS
14.	Y	Y	Y	Y	Y	
15.	Y	N	N	Y	Y	5th grade level books are scarce. Everything was too high. Fine for 8th grade.

C. Thematic Unit Evaluation

Give a comprehensive evaluation of the following by specifically indicating strong points, weak points and recommended changes.

(I) Objectives

(A) Goals:
1. - Strong
2. - Strong
3. - Strong
4. - Weak - few opportunities existed
5. - Strong
6. Weak - This goal could be accomplished better in another setting.

(II) Concepts: No Comment.

(III) Subject matter:
Add vocabulary words of: fresco, Michaelangelo, David, Moses, Naples, Mt. Vesuivus, Florence, Sorrento, Arch of Triumph, Circus Maximus, Forum, Spanish Steps

1. How easily were you able to integrate the Career Education concepts into your curriculum as demonstrated by this unit?

This was very easy and really added an extra to an enjoyable vacation.

2. What opportunities did you provide to allow input from your students, colleagues and community? What were the results of these inputs?

As almost all was unplanned input because it was new to everyone, it took just an awareness on part of parent to occasionally point out ideas or objects.

3. Additional comments:

Other general comments: As this unit was written and taught by a parent, it is missing a very important element of evaluation by "real" classroom teacher.

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Motivational Activity #	Strong Points	Weak Points	Recommended Changes
1.	Was really an exciting adventure for children. This was their first "legal" signature.		None
2.	These were often sparked by related activities.	Sometimes were really not relevant to all concerned.	

Subject Matter Learning Activity	Strong Points	Weak Points	Recommended Changes
1.	It was excellent.		I wouldn't change anything.

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Correlating Activity #	Strong Points	Weak Points	Recommended Changes
1.		These often favored one previous interests.	
Individual Study Activity #	Strong Points	Weak Points	Recommended Changes
1.		For the objectives not met, this was not a good resource.	Tour books of Italy are really better supplemented reading.
Culminating Activity #	Strong Points	Weak Points	Recommended Change
1.		Although all participated, one member dominated	Each child be assigned a portion to do.

CAREER EDUCATION FOCUS: WRITING THE BUSINESS LETTER - GRADE EIGHT

INTRODUCTION:

This unit on teaching the writing of business letters to eighth graders will stress accuracy, courtesy, and promptness--all traits needed by students and workers. This unit will reinforce letter writing done in earlier grades. Periodic attention to letter writing will produce better letter writers.

Eighth graders like to do practical things, and along with spelling most eighth graders readily accept this writing as a useful and necessary kind. All ability levels of students find they can successfully produce a letter. For some this will be a simple request letter, and for others it might be a letter of adjustment for a claim. Within the framework of successfully writing a business letter, attention will be paid to the Communication and Media career cluster will concern for the required education level for certain jobs and the relationship between leisure time activities and occupations.

I. Objectives

A. Goals

1. Eighth graders should learn to use written communications effectively.
2. Eighth graders should learn to share their ideas, skills, and problems with fellow classmates.
3. Eighth graders should learn how leisure-time activities relate to work.
4. Eighth graders should learn the levels of education required for certain jobs, especially in this unit as related to Communication and Media.
5. Eighth graders should learn the need for making neatly constructed products, such as letters.

B. Behavorial Objectives

1. Given a model of a request letter and instructions and materials, each eighth grade student will demonstrate his competency in composing a business letter by writing an original request letter, using acceptable levels of correctness, completeness, courtesy, conciseness, and clearness as indicated on a scale previously handed out. The minimum level of performance is attaining sixty points on this scale.
2. Following discussion of the business letter, each eighth grade student will volunteer to bring in an example of a business letter from home, relatives, or businesses to demonstrate his interest.
3. Each student will voluntarily write at least one other letter. The minimum level of performance would be sixty points attained on a performance scale previously handed out. These letters

might concern careers in communication and media. Some letters might concern the levels of education required for certain jobs and the relationship of leisure activities to careers.

4. Following the class periods on writing the business letter and addressing the envelope, each student will:
    a. Fold the letter as demonstrated for insertion in the envelope;
    b. Arrange the return address and address on the front of the envelope exactly as shown on the bulletin board and the textbook model.
5. Given model business letters with six parts labeled and the letters written in three different styles, each student can name the parts and styles with 90% accuracy on an unlabeled model letter.
6. Following discussions of the school's extra-curricular activities, students' home leisure activities and hobbies, and following independent reading, television viewing, etc., each student will list ten terms related to a leisure time activity he has found interesting.
7. Given letters written by fellow students and following guides on small group discussion, each student as part of a small group will cooperatively examine letters of fellow students and share one suggestion for improving a letter in the group of letters he has read.
8. Having examined the three styles of a business letter (block, semi-block, and full block) in the textbook, each student will neatly construct a colorful skeletal model of each style with construction paper. Each model would have to be exact, showing comparative positions of headings, paragraph indentions, etc.

II. Generalizations

A. Letter writing is an accepted means of communication in the world of work.

B. A satisfactory product, such as a well-written letter, neatly written or typed and neatly folded, is the expected product required in the world of work.

C. Cooperation and sharing is part of the world of work.

D. Most careers require some special education.

E. Avocations often lead into vocations.

III. Subject Matter

A. Vocabulary Terms to be Defined

1. Business Letters

   a. parts: heading, inside address, salutation, body, and complimentary close

   b. styles: block, semi-block, full block

2. Concern of education

   a. Technical School

   b. Business School

   c. Graduate School

   d. Apprenticeship

   e. Co-educational

   f. Curriculum

3. Concern of leisure

   a. extra-curricular

   b. Terms from student's own leisure activities

B. Basic Academic Skills to be Developed

1. Ability to write the correct form of the business letter.

2. Ability to write courteously, concisely, and clearly.

3. Ability to proofread.

4. Ability to explain and point out special features in front of a group.

C. Careers Related to the Thematic Unit Grouped by Career Clusters

A. Media and Communication

a. Secretary
b. Executive
c. Editor
d. Writer
e. Proofreader

B. Hospitality and Recreation

a. Professional Athlete
b. Athletic coach
c. Park ranger
d. Lifeguard
e. Greenskeeper
f. Camp counselor
g. Airline Stewardess
h. Ski Instructor

C. Business and Office

a. Typist
b. Clerk
c. Receptionist
d. Secretary
e. Stenographer

D. Public Service

a. Mail Carrier
b. Mail truck Driver
c. Post Office Clerk

IV. Student Learning Activities

A. Motivational Activities

1. Have students recall instances of their needing to ask for information and materials, and instances of parents and relatives needing to write letters, such as letters of complaint, order, claim, request, and letters-to-the-editor.

2. Mention three very effective letters written recently.

a. A citizen wrote to the Federal Communications Commission requesting equal time to rebute cigarette companies' commercials.

b. A girl wrote to Lionel Train Corporation, complaining of bias by sex in always using boys playing with Lionel Trains in commercials and advertising.

c. A boy wrote to the Internal Revenue Service complaining that the price of model glue had increased beyond the price guide lines. This occurred in the fall of 1973 and was reported on national television, as was the Lionel Train incident.

B. Subject Matter Learning Activities

1. Have students go to the board to point out names of parts of business letter.
2. Have students point out punctuation and parts which are special to the business letter.
3. Have students point out and discuss the five C's of a business letter model as shown on a screen by an overhead projector.
4. Study the form of an envelope, noting the similarity of the inside address to the name and address of the person to whom you are writing.
5. Write three skeleton letters (no body to the letters, except that made with wavy lines to represent the message), showing the block, semi-block, and a full block style.
6. Write a letter of request, showing the accepted form for a letter and writing a message which is concise, complete, clear, and courteous.(Recommend writing letters asking for career information in communications and media.)
7. Class, divided into groups, would examine first-drafts of request

letters to suggest improvements in letters they are reading and to gain ideas for improving their own. Letters should be rewritten. Letters would be sent out, except when the letter was a duplicate request to the same company.

8. After having studied the criticism of his request letter by his classmates, each student will write an order letter (generally imaginary), where emphasis will be on completeness. (Recommend writing letters asking for materials related to leisure-time activities of student interest.)
9. Students share letters brought from home, noting especially examples of courtesy and conciseness. Have students note variations in use of style, abbreviations, closings, etc. Display with the opaque projector.
10. Prepare a list of ten terms from leisure-time activities to put in the student's folder for possible use in writing a letter requesting leisure-time activity information.

C. Correlating Activities

1. Mathematics; adding and multiplication, using sales tax in order letters.
2. Art; making an attractive folder for displaying letters and envelopes
3. Physical education; borrowing sports catalogues for order letter
4. Business education; comparing requirements for business letters by senior high teachers.

D. Individual Study Activities

1. Some students will voluntarily write one or more of the following letters:
   a. A letter - to - the - editor, dealing with some local

topic of interest to the student, which is or isn't being acted upon as he would like.

b. A letter to a radio or T.V. station approving or disapproving a recent production.

c. A letter of complaint.

d. A letter of adjustment.

e. A sales letter concerning communication, leisure activities and educational training.

f. A letter to a particular company, requesting an application blank

    1. Fill in an application blank
    2. Write a letter of application to be submitted along with the application blank (Suggest letters requesting application to post-secondary schools)

2. Some students will voluntarily take typing in summer school to improve further ability in writing letters.
3. Students who have been absent will read pages 397-402 in the text to get information on the business letter.

E. Culminating Activities:

1. Each student will maintain a folder of letters he has written and of real letters and envelopes he has been able to collect. The student will label the kind of letter (request, order, etc.) and style of letter (block, etc.)
2. Talk by postmaster to discuss needs by post office for ZIP Code and legible address on the envelope. Additionally, he might explain the volume of mail in Berwick, number of employees to handle that volume, and educational qualifications required.

VI. Bibliography

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Suggested Activities in English Composition. Curriculum Series No. 2., Pa. Dept. of Education, 1963.

V. Evaluation

A. Evaluation of student achievement of stated objectives:
Please indicate yes (Y), no (N), or not applicable (NA) for items.
Be sure to include any pertinent explanations in comments column.

(1) Objectives (B) Behavioral Objective No.	Was it taught?	Was criterion met?	Was criterion realistic?	Is it re-usable?	Was it worth the time?	COMMENTS
1.	Yes	Yes	Yes	Yes	Yes	
2.	Yes	No	No	No	N/A	Only 12 of 30 students brought letters from home.
3.	Yes	Yes	Yes	Yes	Yes	Few of the letters concerned communication and media.
4.	Yes	Yes	Yes	Yes	Yes	
5.	Yes	Yes	Yes	Yes	Yes	
6.	No					In doing business letters, we simply did not get around to discussing leisure time activities
7.	Yes	Yes	Yes	Yes	Yes	
8.	Yes	Yes	Yes	Yes	Yes	

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Motivational Activity #	Strong Points	Weak Points	Recommended Changes
1.		Few wrote such letters.	

Subject Matter Learning Activity	Strong Points	Weak Points	Recommended Changes
1.			Have one student volunteer do this each day during unit.
2.			
3.			
4.			
5.			None
6.			Probably shouldn't limit career information to communication and media.
7.			None
8.			Need more structural presentation of tie-in of leisure to career.
9.			Classroom not dark enough for use of opague.
10.		Didn't follow this up.	

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Correlating Activity #	Strong Points	Weak Points	Recommended Changes
1.			O.K.
2.		Not Done since only 12 of 30 students brought in any letters.	
3.		Only 3 students followed this up.	
4.	Noted same requirements.		

Individual Study, Activity #	Strong Points	Weak Points	Recommended Changes
1.			None
2.			They have until June 6 to sign up. No information on extent. I'll know later.
3.			None

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Culminating Activity #	Strong Points	Weak Points	Recommended Changes
1.			Over several months duration this should be successful.
2.			As 450 citizens applied for 1 opening in March. No emphasis on post office jobs is needed.
3.			Not done.

PRODUCING SOUND FOR COMMUNICATION AND CAREERS - GRADE NINE

INTRODUCTION:

The objective in the teaching of this unit is to show how biology and the physical sciences are closely related. From the simple concept that a vibration gives rise to sound, which was developed in the previous chapter, the student will now advance to a study of sound waves and how they are formed. The student will investigate the waves produced by air columns and by strings. He then proceeds to an investigation of percussion instruments. Following this, he will analyze the sound production elements of his own voice and the sound elements of various animals. Upon completion of this, the student will be introduced to the hearing of sound in the next chapter.

A primary concern of this unit is the correlation of sound production to various careers in the areas of communication and media, the fine arts and humanities, hospitality and recreation, and manufacturing in the general concerns of self, leisure,and decision-making activities. Through teaching this unit, we desire to learn what procedures, skills, and knowledge will help the individual achieve his goal of producing high quality results from personal commitment and insuring continuing participation.

I. Objectives

A. Goals

1. The student will be able to relate a knowledge of energy to the area of sound.
2. The student will understand how sound waves are produced by strings, vibrating air columns, and percussion instruments.
3. The student will understand the manner in which the human voice produces sound as opposed to the manner in which animals produce sound.
4. The student will have a better understanding of the classification of sound as noise in the field of communication and careers.
5. The student will have fundamental knowledge and appreciation for the field of sound in relation to the field of communication and its careers.
6. The student will develop knowledge of his own unique pattern of personal values as it relates to sound.

B. Behavioral Objectives

1. After reading chapter 9 on the production of sound, p.p. 190-209 in Energy and the Atom by Navarra and Carona, pp. 1966, viewing the filmstrip "Sound and participating in classroom experiments, the student will write a one paragraph generalization within a 10 minute time limit which indicates why sound falls within the realm of energy.

2. Following an instructor based demonstration showing the production of sound by vibrating strings, vibrating air columns, and percussion instruments, the student will select a form of sound production which he is interested in and make a workable musical instrument (already in use or of his own design) using this method of sound production.
3. After viewing a 2 x 2 slide show accompanied by an audio tape concerning the production of sound by vibrating strings, vibrating air columns, and percussion instruments, the student will identify at least 10 different sounds as to their method of production with a minimum of 80% accuracy.
4. After viewing overhead transparencies and during class discussions concerning the production of sound by humans and various animals, the student will voluntarily ask questions and state his views as to which has the most sophisticated method of sound production and which uses it to his best advantage.
5. After listening to various types of musical sounds by means of tapes and/or records, the student will classify the sounds as being either pleasing to the ear (produced by regular vibrations) or as noise (produced by irregular vibrations). Then, he will state at least two reasons for his decision.

6. After listening to a tape of five types of music (classical, hard rock, rhythm and blues, jazz, country and western) the student will list the types of music heard according to his priority beginning with his strongest interest.

7. Upon completion of behavioral objective #6, the student will write a one-paragraph generalization stating why he preferred one particular type of musical sound over another.

8. After listening to the tape used in behavioral objective #6, the student will select one preferred style of music and list at least fifteen occupations related to the production of that type of music.

9. Following the above objective, the student will show a preference for one of the occupations listed and relate at least five activities and performance levels to important self-characteristics which he believes would influence his performance in that occupation.

10. After voluntarily producing a short video-tape recording, the student will identify at least fifteen occupations associated with the production of the tape.

11. After viewing the video-tape recording and discussing the occupations listed in objective # 10, the student will write a short statement of at least two paragraphs stating how leisure time activities can influence and in turn be influenced by one's career choice.

12. After a discussion on sound as being either pleasing to the ear or noise, the student will, to his own satisfaction as noted by voluntary response, suggest possible alternative solution to the unsolved problem of whether sound is pleasing or noise.
13. After classroom discussion concerning the consequences and/or the risks of alternative solutions stated in behavioral objective #12, the students will select one method of labeling sound and state five ways that it could be used in the area of sound in communications.
14. After a teacher-based lecture using overhead transparencies, and a class discussion concerning production of sound waves by vibrating strings and air columns, the student will diagram on paper the node and antinode positions for the standing wave sequence produced in each, with a minimum competency of 70%.
15. After viewing transparencies and discussing the vocal organs of the human and those of the bird in relation to their functions as producers of sound, the student will identify (by listing) and describe the position and function of each part in its respective organism with a minimum competency of 70%.
16. After studying the unit on the production of sound, the student will correctly use in normal conversation all terms in the vocabulary list without outside assistance with 100% accuracy.

II. Concepts and/or Generalizations

A. Elasticity and momentum can set a string to vibrating.

B. A string produces a sound wave when it vibrates.

C. One kind of wave is known as a standing wave; a node and antinode are two important parts of a standing wave.

D. A stretched string produces a tone known as a fundamental when it vibrates as a whole.

E. A string can vibrate as a whole and in segments simultaneously, producing a blend of tones.

F. A parcel of air has elasticity.

G. Elasticity and momentum can set a column of air to vibrating.

H. A wave within an air column consists of a loop, a node, and an antinode.

I. A vibrating column of air produces a sound wave.

J. A percussion instrument produces a sound wave when it is struck; among the percussion instruments are drums, bells and cymbals.

K. A percussion instrument produces irregular sound waves.

L. A set of vibrating strings (the vocal cords) produces the sound of your voice.

M. The vocal cords consist of two fibrous bands stretched across the voice box, or larynx.

N. The voice box is partly like a wind instrument and partly like a string instrument; the vocal cords vibrate like strings; a column of air within the voice box vibrates along with the vocal cords.

O. The vocal organs consist of the larynx, lungs, windpipe, throat, nose, and mouth.

P. The larynx is composed of a cavity, the vocal cords, and nine cartilages (cricoid-1, thyroid-1, epiglottic-1, arytenoid-2, corniculate-2, cuneiform-2).

Q. The human voice has certain qualities intensity, timbre, and pitch.

R. Language is the mechanism by which man communicates ideas and expresses feelings.

S. Speech is a highly developed form of language using articulate sounds.

T. The voice is purposive production of sound by means of the respiratory organs.

U. The human voice mechanism is made up of the vibrator, (vocal cords), motor (force), resonator (amplifier) and articulators (lips, teeth, tongue, palats).

V. The tone of one voice differs from the tone of another voice.

W. Animals have voice boxes and are able to make sounds.

X. The sounds of animals differ among the various species.

Y. A sound classified as noise results from an irregular vibration.

Z. There is no definite borderline between tone and noise.

A. Different careers require different knowledge, abilities and attitudes.

B. People pursue careers for many different reasons.

C. Careers can be grouped into "families" requiring similar abilities and providing similar rewards.

D. Any career area has different levels in responsibility.

E. Every occupation contributes to society.

III. Subject Matter

A. Vocabulary terms to be Defined:

1. antinode
2. arrangement
3. articulation
4. arytenoid
5. Chladni figures
6. corniculate
7. cricoid
8. cuneiform
9. epiglottic
10. first harmonic
11. fundamental
12. harmonics
13. larynx
14. frequency
15. loop
16. node
17. oscilloscope
18. overtone
19. palate
20. pitch
21. percussion
22. standing wave
23. syrinx
24. thyroid cartilage
25. synchronization
26. generalization
27. values
28. communication
29. media
30. careers
31. video-tape recorder
32. leisure
33. voluntary
34. competency
35. competency
36. application
37. expectations

B. Basic skills to be Developed:

1. Categorization: ability to classify, group, choose, differentiate and correlate various terms, concepts and theories.
2. To acquire manipulative skills related to sound production.
3. Paragraph writing: communicating through written statements.
4. Diagraming: communicating with graphic method.

5. Oral communication: ability to communicate through the use of language.
6. Learn what occupations are available in Communication and Media in the community.
7. Be able to research occupation.

C. Careers Related to the Thematic Unit Grouped by Career Clusters

1. Careers in Communications and Media
    a. Announcer
    b. Cable Splicer
    c. Photographer
    d. Reporter
    e. Technical Illustrator
    f. Telephone Operator
    g. Transmitter Operator
    h. Commercial Artist
    i. Telephone Equipment Installer
    j. Copywriter
    k. Composing Room Occupations
    l. Photoengraver
    m. Radio and T.V. Occupations
        1. announcer
        2. chief engineers
        3. continuity director
        4. director
        5. film editor
        6. floormen
        7. make-up artists
        8. music-librarian
        9. musical-director
        10. newscaster
        11. newswriter
        12. producer
        13. program director
        14. scenic designer
        15. sound effects technician
        16. stage manager
        17. time salesman
    n. Broadcast Technician
        1. audio control technician
        2. maintenance technician
        3. video control technician
    o. Radio Operator
    p. Technical Writer

2. Careers in Fine

    a. Actors
    b. Actresses
    c. Instrumental Musician
    d. Singers and Singing Teachers
    e. Musicians and Music Teachers
    f. College Audio Visual Teacher
    g. Music Composer

3. Careers in Hospitality and Recreation

    a. Reservation Agent
    b. Travel Agent
    c. Recreation Worker
    d. Hotel Manager

4. Careers in Construction

    a. Architect
    b. Carpenter
    c. Sheet Metal Worker
    d. Welder
        1. arc cutters
        a. oxygen cutters

5. Careers in Consumer and Homemaking Education

    a. Dietician
    b. Food Service Occupations
        1. chef
        2. cook
        3. waitress
        4. dishwasher

6. Careers in Health

    a. Nurse, Registered
    b. Medical Emergency Services

7. Careers in Manufacturing

    a. Engineering Aide
    b. Foundry Worker
    c. Electroplater
    d. Machinist
    e. Molder & Coremaker
    f. Packager
    g. Tool & Die Maker
    h. Welder
    i. Tool Grinder Operator
    j. Electronics
    k. Instrument Makers
    l. Executive Manager

8. Careers in Marketing and Distribution

    a. Bank Cashier
    b. Vending Machine Repairman
    c. Stock Clerk
    d. Salesman, General
    e. Credit Manager
    f. Shipping & Receiving Clerks
    g. Manufacturer's Salesman
        1. Sales Engineer
    h. Advertising Worker
        1. Account Executives
        2. Advertising Copywriters
        3. Advertising Manager
        4. Artists
        5. Media Director
        6. Production Managers
        7. Research Directors
    i. Painter, Sign
    j. Commercial Artist

9. Careers in Public Service

    a. Watchman
    b. Receptionist
    c. Legal Secretary
    d. Personnel Workers

10. Careers in Transportation

    a. Tractor Trailer Driver
    b. Truck Driver, over the road
    c. Local Truck Driver
    d. Truck Mechanics

IV. Student Learning Activities

A. Motivational Activities

1. Filmstrip - "Sound"

2. Teach or student-based (voluntary) experimentation showing sound production in relation to energy.

3. Slide show with audio tape illustrating the production of sound by vibrating strings, vibrating air columns, and percussion instruments.

4. Student designing and making a musical instrument.

5. Play a tape containing at least 10 different types of sound.

6. Play a tape and/or record of at least 5 different types or styles of music.
7. Guest speakers that have careers in the area of sound production.
8. Production of a video-tape recording.

B. Subject Matter Learning Activities

1. Produce a video-tape recording.
2. View a 2 x 2 slide show illustrating the production of sound by vibrating strings, vibrating air columns, and percussion instruments.
3. Experiment #28, Page 83: Elementary Experiments in Science.
4. Experiment - Page 193 - text.
5. Chapter 9, "Producing Sound", pp. 190-209, Energy and the Atom.
6. Draw and identify the first four harmonics of a string, a column with open ends, and a column with at least one closed end.
7. Diagram and label the vocal organs of man and those of a bird.
8. Compare and contrast the vocal organs of man and bird.
9. Completion of a one-paragraph generalization by the student indicating his preference for a particular type of music and his reasons for his selection.
10. Diagram, label, and discuss the node and antinode positions of a standing wave.

11. Show how the human voice not only produces sound, but also how the voice can be changed in pitch, quality and volume.
12. Show how the voice is articulated.
13. Completion of generalization showing how and why sound is classified as a form of energy.
14. Completion of 10 questions for thought and analysis concerning sound and sound production.
15. Turning in of a short statement of at least two paragraphs showing that leisure time activities can influence and in turn, be influenced by one's career choice.
16. Selection of a related occupation which is to be further developed as to job possibilities, interest, and related activities.
17. After listening to a tape of several sounds, the student will catagorize the sounds according to either noise or regular harmonics.
18. Following activity #17, discuss how noise would influence communications.
19. A class discussion about how the human voice has been adapted as a major means of communication and in what career areas it could be used.
20. To discuss how animals benefit from or use sound as a means of communication to their best advantage.

C. Correlating Activities

1. Relate the tapes on sound production to the principles behind the design and production of musical instruments.
2. Using the musical instrument made by the student,

or the professional manufactured instrument, associate several occupations involved in the production of each.

3. Explain and discuss how the human voice is used in the field of sound.
4. Relate music-type tapes to all phases of production with career opportunities in mind.
5. English: the study of sentence structure and paragraph writing could be used with the following in mind; a one-paragraph generalization indicating why sound falls into the realm of energy; a one-paragraph generalization stating why the student preferred one type of music to another; and the two paragraphs showing that leisure time activities can influence and in turn be influenced by one's career choice.
6. History and music: a joint study dealing with the history of music and musical instruments and how music plays a larger part in our lives each year.
7. Art department: instruction for students in set design with the proper techniques for composing diagrams, and also designing techniques to be used in the making of the students musical instruments.
8. Industrial Arts: make the musical instruments that were designed in Art.

E. Culminating Activity

1. Displaying the musical instrument designed and manufactured by the student.
2. Explaining the theory behind the musical instrument which the student designed, and producing sound with it.
3. Viewing the video-tape recording produced by the class.

IV. Bibliography Resources and Other Materials

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Cluster Resource Guide - - *Fine Arts*. Intermediate Unit #16, Lewisburg, Penna., 1973; I. U. #16.

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V. Evaluation

A. Evaluation of student achievement of stated objectives:
Please indicate yes (Y), no (N), or not applicable (NA) for items.
Be sure to include any pertinent explanations in comments column.

(1) Objectives (B) Behavioral Objective No.	Was it taught?	Was criterion met?	Was criterion realistic?	Is it re-usable?	Was it worth the time?	COMMENTS Unit was not taught in entirety
1.	Yes	Yes	Yes	Yes	Yes	This was incorporated into one of the worksheets. Filmstrip "Sound" is not advanced enough for this group.
2.	Yes	Yes	Yes	Yes	Yes	Fantastic! Students did an outstanding job with 100% success. Must remember to be very strict concerning outside help!
3.	No					Not ready in time.
4.	Yes	Yes	Yes	Yes	Yes	Students also completed a worksheet concerning this. Success for all but one student.
5.	No					Not ready in time.
6.	No					Not ready in time.
7.	No					Did not do B. O. #6.
8.	No					Did not complete B. O. #6.
9.	No					Did not complete B. O. #6.
10.	No					Not able to get VTR in time.
11.	No					Not able to get VTR in time.
12.	Yes	Yes	Yes	Yes	Yes	
13.	No					Ran out of time - end of year.
14.	Yes	Yes	Yes	Yes	Yes	Written work in form of worksheet. Good!
15.	Yes	Yes	Yes	Yes	Yes	Student did an outstanding job. Wish I had a visual model to use. Ordered for next year.

C. Thematic Unit Evaluation

Give a comprehensive evaluation of the following by specifically indicating strong points, weak points and recommended changes.

(I) Objectives- This unit should be divided into two smaller traces.

(A) Goals: All goals were met with success on the part of most of the students even though I was not prepared as I did not have all my materials ready.

(II) Concepts: All concepts were within range of teaching and were taught except that I found the concept of overtones slightly difficult to explain.

(III) Subject matter: OK. Incorporated into discussions and worksheets. Regret not using VTR in class. Did not have an oscilloscope nor were we able to show Chladni Figures but we did discuss them.

1. How easily were you able to integrate the Career Education concepts into your curriculum as demonstrated by this unit? Very easy. Students at first did not relate careers to class but they adapted very easily.

2. What opportunities did you provide to allow input from your students, colleagues and community? What were the results of these inputs?
Community - none - insufficient planning
Colleagues - invited and requested - assistance
Students - during discussions and out of class talks - good results

3. Additional comments:

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Motivational Activity #	Strong Points	Weak Points	Recommended Changes
1. Filmstrip	Showed how sound was related to energy and various causes of sound. Able to stop and discuss at will	Too elementary for top level students.	Show only to average and below average students. Use as aid for those having difficulty.
2. OK	Good. Brought about discussion and interest.	Did not spend enough time in experimentation.	More student participation.
3. Did not complete. ----------			
4. OK	Excellent for developing a variety of personal characteristics and attitudes. Room for change and creativity of each student.	Completed at home and some had an excess amount of outside help, esp. girls.	None

Subject Matter Learning Activity	Strong Points	Weak Points	Recommended Changes
1. ---------			
2. ---------			
3. OK	Good because students were able to view, question, expt., and evaluate.	Not all students were able to conduct expts. due to amount of equipment and phys. char. of room	Add more expts. or do them as an individual learning station.
4. OK	Good because students were able to view, question, expt., and evaluate.	Not all students were able to conduct expts. due to amount of equipment and phys. char. of room	Change to learning station and allow all students to work with it.

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

	Strong Points	Weak Points	Recommended Changes
5. OK	Gave basis for our study and brought about many questions.	Book not clear on explanations of certain terms and some expts. not feasible or do not work.	None
6. OK	Students able to view, compare and contrast the various methods of sound production.	Some not able to fully grasp concepts	
7. Reduced to labeling	Students had something to view for comparison and also learned of the involved processes	Actually a rote memory process.	
8. OK	Showed that not all sounds are produced the same.		
10. OK	This gives basic understanding behind how a string vibrates to produce sound.		
11.. OK	Show how speech sounds are prod. and what is involved in each. Students made aware of things done automatically Shows complexity of the system.		
12. OK	Show how speech sounds are prod. and what is involved in each. Students made aware of things done automatically Shows complexity of the system.		

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

	Strong Points	Weak Points	Recommended Changes
13. OK	Students must develop ability to rationalize and catagorize prior knowledge of sound and energy to decide upon their relationship.		
14. OK	Good for develop students process of thinking, catagorizing, reasoning, and analyzing material for a response.		
19. OK	Enhances reasoning and decision-making powers.		
20. OK	Show by deductive reasoning how animals use sound as a means of communication.		

Correlating Activity #	Strong Points	Weak Points	Recommended Changes
2. OK	Great to develop the idea of variation in jobs related to prod. of a product.		

Culminating Activity #	Strong Points	Weak Points	Recommended Changes
1. OK Great	Student displayed and explained something that "he" made. All had to decide what they wanted to do and them complete the project.		
2. OK Great	Student had to compile much info he learned during the unit in order to accomplish this		

GUIDANCE ACTIVITIES IN CAREER EDUCATION THROUGH THE COMMUNICATION AND MEDIA CLUSTER

GRADE NINE

INTRODUCTION:

Career Education is an effort of both public schools and community involvement. Their efforts should help all students to become familiar with the value of work. These values should be integrated into their personal value structure with respect to work. Jobs and careers will then become more meaningful and satisfying to the student.

The two concerns in this unit are Self and Careers. These concerns were selected from the Pennsylvania Career Development Education Model.

Communications and media are considered to be among the fastest growing industries in the United States. The students will get exposure to this career cluster and have an opportunity to investigate it further, it they so choose.

Several learning and motivating activities are incorporated to help the student learn as much as he can about communications and media.

They will see the variety of jobs in this cluster and large number of things with which people work; educational requirements and special training for certain jobs. They will also learn of the advantages of this cluster, both economic and personal satisfaction.

I. Goals

A. Self-Knowledge

1. Students will develop an understanding and an appreciation for the various jobs within this career cluster.
2. Students will develop a better understanding of his/her own personal characteristics as they relate to the jobs within this career cluster.
3. Students will develop a vocabulary as it relates to this cluster and for distinguishing self-characteristics (i.e., interests, abilities, aptitudes, etc.)
4. Students will develop a better understanding of the world of work by using media such as slide viewers, film strip projectors, and tape recorders.
5. Students will develop necessary skills such as ability to accept direction and responsibility.
6. Students will develop an awareness of skills and to acquire a value for these skills which will be helpful to the student in his/her choice of jobs or careers.
7. Students will be able to determine the basic characteristics and qualifications related to the preparation for and performance of the main tasks associated with various occupational roles.
8. Students will develop the necessary skill to research occupations.

B. Behavorial Objectives

1. After reading the job description of a newspaper reporter, the students will report in writing at least two statements about each of the following:
    a. Educational background
    b. Job requirements
    c. Job market
2. After researching the vocabulary terms listed under subject matter of this outline each student will define the stated terms. A matching test will be given to the class in which 18 correct answers will be considered as a passing grade.
3. Given occupations or careers within the Communications and Media cluster, each student will select three and research the Dictionary of Occupational Titles and write a report about each occupation or career which will include at least one statement about each of the following:
    a. Educational background
    b. Job requirements
    c. Job market
4. Given occupations within the Communications and Media cluster each student will research the Occupational Outlook Handbook and write a report on each of the occupations which will include at least one statement about each of the following:
    a. Educational background
    b. Job requirements
    c. Job market
5. After researching occupations in Communications and Media, that are found in their community, each student will make a

list of at least ten occupations that are found within this career cluster.

6. After receiving and studying the material in the Career Packet about Communications and Media, each student will have an opportunity to volunteer a five-minute oral report to the class. Evaluation of the report will be made by the teacher on the basis of the feelings expressed by the student about his/her impression of workers in this career cluster.
7. Given instructions and a demonstration on the use of a film strip projector, a slide projector, a tape recorder, each student will operate and demonstrate to the teacher that they are able to use this equipment successfully.
8. After receiving directions and given a demonstration by the teacher on how to complete a student request card, the student will select a cluster; fill in the grid for this cluster; and fill in the name grid. Errors will not be accepted.
9. Following a lecture on interviewing techniques, each student will plan and conduct one interview. The results of the interview will be presented to the class.

II. Generalizations:

A. Every person is an individual, with different abilities, intererests, needs, and values.

B. Environment, attitudes, behaviors, knowledge, and value judgments have an influence on vocational choice.

C. The student will gain a general understanding of the world of work by investigating career clusters and using various media.

III. Subject Matter

A. Vocabulary Terms to be Defined:

1. Journeyman
2. Job entry
3. ability
4. interest
5. attitude
6. achievement
7. on the job training
8. Educational background
9. licensing
10. Certification
11. Fringe benefits
12. Commercials
13. Media
14. Programming
15. Technology
16. Networks
17. Communications
18. Psychology
19. Federal Communications Commission
20. marketing
21. management
22. manpower
23. apprenticeship
24. unions
25. skills

B. Basic Academic Skills to be Developed

1. Be able to research occupations.
2. Using the Dictionary of Occupational Titles.
3. Familiarization with the Occupational Outlook Handbook.
4. Learn what occupations in Communications and Media are available in the community.
5. Using a film strip projector, a slide projector, and a tape-recorder.

C. Careers Related to the Thematic Unit Grouped by Cluster Careers

1. Careers in Business and Office
    a. Receptionist
    b. Bookkeeper
    c. Accountant

d. File Clerk
e. Clerk Typist
f. Secretary
g. Stenographer
h. Office Machine Serviceman
i. Personnel Workers
j. Statistician

2. Careers in Fine Arts

a. Actors
b. Dancers
c. Instrumental Musician
d. Singers
e. Musicians
f. Art Curator
g. Novelist
h. Artist

3. Careers in Marketing and Distribution

a. Account Executives
b. Advertising Copywriters
c. Advertising Manager
d. Artists
e. Media Directors
f. Production Managers
g. Research Directors
h. Marketing Research Worker

D. Other Topics: e. g., Specific Occupational Information

1. Dictionary of Occupational Titles

2. Occupational Outlook Handbook

3. Pamphlets and articles available from various occupations

4. Names and addresses of where to get specific occupational information

5. Library

6. Guidance Office

7. Intermediate Unit

8. Local Industries

9. Unions

10. Employment Office

IV. Student Learning Activities

A. Motivational Activities

1. Students will be shown video tapes that were produced by the Career Education Team about Cosmotology. A class discussion will follow concerning the use of this media in Career Education.
2. The students will view the 8mm film which was produced by the Career Education team about Health Assistants. A class discussion will also follow concerning the use of this media in Career Education.
3. The students will make field trips to industries in the community. These industries will have occupations and careers in Communications and Media.
4. Students will interview employers and employees. These individuals will provide the students with information about their occupations, giving the interview a personal touch.
5. Students will use film strip projectors and tape recordsrs to learn about related occupations in Communications and Media occupations.
6. Students will view films pertaining to Communications and Media occupations.
7. Students will make a scrapbook about Communications and Media.
8. Students will bring to class audio-visual aids that pertain to this unit.

9. Students will bring to class articles from newspapers or periodicals and report same to the class.

10. Students will display Communications and Media posters in the halls of the school.

B. Subject Matter Learning Activities

1. The student will select 3 occupations from the Communications and Media cluster. He will make a written report on his selections to include the following;
    a. Educational background necessary for each occupation.
    b. A brief job description.
    c. The job market for the occupation.
    d. Salary or wage information.
2. The student will examine the local newspapers want ads for three days and make a list of jobs available locally in Communications and Media.
3. The students will read occupational information from Pennscript and make a written report on Telephone Operator. the report will include information about the following:
    a. Job requirements.
    b. Training needed and where to get it.
    c. Educational background needed for this occupations.
    d. Job opportunitites.
4. The students will view the film, "Is a Career in Radio or Television for you?"

C. Correlating Activities

1. Students will interview other students in the school, using a tape recorder, and learn about occupations these students intend to persue.

2. Students will make up bulletin boards about Careers in Communications and Media.
3. Students will make a list of Communications and Media found within the school.
4. Students will interview other students of the school to learn about attitudes with respect to work.

D. Individual Study Activities

1. The class will research the Dictionary of Occupational Titles for an occupation of their choice within the Communications and Media cluster. Each student will make a written report on the job description of their selected occupation.
2. The class will research the Occupational Outlook Handbook for an occupation of their choice within the communications and Media cluster. Each student will make a written report to include the following:
    a. Job description.
    b. Job market.
    c. Salary or wage information.
    d. Educational background.
3. The student will research and write a report on the occupation of photographer as related to Communications and Media. The following will be included in this report:
    a. Nature of the work.
    b. Places of employment.
    c. Training and other qualifications.
    d. Working conditions.
    e. Earnings.
4. The student will view a film strip on the telephone industries

"Service Representative". A written report is to be made and will include the following:

   a. The student's feelings about this occupation.
   b. Personal characteristics necessary for this occupation.
   c. Job requirements.

5. The student will research the occupation of Reporter and make two lists showing the advantages and disadvantages of career.

E. Culminating Activities

1. There will be a period devoted to open discussion allowing the students to express their feelings about Communications and Media.
2. The students will write a minimum of two paragraphs explaining the need for Communications and Media in our society.
3. The class will prepare an audio-visual display of Communications and Media in a suitable place within the school. Each member of the class will display something which represents the occupation in which he shows the most interest. A committee will be selected by the teacher to supervise and make the display attractive.

VI. Bibliography and Resource Material

Bloom, B. S. Taxonomy of Educational Objectives Handbook 1: Cognitive Domain. New York: David McKay, 1956

Bomtoms, J. E. Career Education Resource Guide. Morristown, N. J.; General Learning Corporation, 1972.

_______. Career Development K-12. Annapolis, Maryland; Anne Arundel County, 1971.

_______. Cluster Resource Guides. Lewisburg, Pa., Intermediate Unit #16, 1973.

_______. Educational Guide to Free Filmstrips. Randolph, Wisconsin; Educators Progress Service, Inc. 1974.

Froehlick, C. P. Guidance Services in Smaller Schools, New York, McGaaw - Hill Co., 1950.

Krathwal, D. R. Taxonomy of Educational Objectives Handbook II: Affective Domain. New York: David McKay Co., 1956

_______. Pa. Career Development Education Guide. Harrisburg, Pa; Pa. Dept. of Education, 1974.

Simpson, Elizabeth, The Classification of Educational Objectives Psychomotor Domain. Chicago: University of Illinois, 1966.

SILAS MARNER MEETS CAREER EDUCATION
GRADE TEN

INTRODUCTION:

This unit of study is an integration of the career cluster Manufacturing from Career Education with the novel Silas Marner. This is an experimental unit for 10th graders in order that they may have a better understanding about literature, working, and life, through examining the concerns of self, decision making, and career as noted in the Pennsylvania Career Development Syllabus.

I. Objectives:

A. Goals

1. The students will develop an awareness of careers related to Manufacturing.
2. The students will recognize that important decisions can be best made with proper consideration of all factors involved.
3. The students will develop an understanding of the literary form of the novel.
4. The students will have an effective understanding of the mass production phase of manufacturing.
5. The students will develop further understanding of themselves.

B. Behavioral Objectives:

1. Following the instruction of this unit, each student will state and define in writing five of the seven phases of plot.
2. Following the instruction of this unit, each student will discern and dilineate character through writing or speech (whichever he chooses). Minimum acceptable performance will be a score of 80 on Evaluation sheets previously distributed.
3. Following discussion and reading the novel, each student will analyze cause and effect relationships concerning a character's influence on the plot development by naming in writing two examples and elaborating with two statements.
4. Following discussion, reading, and comtemplation, each student shall deduce the theme by writing one positive and one negative aspect of the theme in an essay of 200 words or less.
5. Given instruction in characterization, volunteers will portray or mimic one character from the story. His success will be

dependent upon a majority of the class recognizing the character being portrayed.

6. Using empty thread spools, glue, and candle receptacles, students will construct a candlestick holder which will satisfactorily support a taper.
7. Using empty quart milk containers, wire coat hangers, aluminum pie plates, students will construct bird feeders (using mass production techniques) suitable for outdoor use.
8. After a discussion of mass production, craftsmanship and manfacturing, each student will list a minimum of ten jobs in the Berwick area which could be classified in the Manufacturing cluster.
9. After successful completion of Objectives 6 and 7, students shall compare and contract individual craftsmanship with division of labor techniques of mass production thru informal discussion. Students will name at least five advantages or disadvantages of each.
10. Given details of decision making made by various characters in the novel, students will state whether or not those decisions were wise ones and give two reasons for each answer.
11. Following completion of candlestick holder activity, the class in open-ended discussion, will voluntarily relate feelings of

success, accomplishment, and empathy for the conditions of the people in the 1800's. Successful completion of this will be noted when 80% of class members have made at least one such statement.

12. Following completion of bird-feeders thru mass production, the class, in open-ended discussion, will voluntarily relate their feelings, positive or negative, success or accomplishment, frustration or despair, revealing an empathy or revulsion for the production worker's lot. Successful completion of this objective will be met when 90% of class members make a minimum of one such statement.

II. Concepts and/or Generalizations

A. The novel is a form for understanding literature and social problems.

B. The world of work affords man the opportunities for self-realization and accomplishment.

C. Work experience facilitates decision making.

III. Subject Matter

A. Vocabulary terms to be defined:

1. novel
2. plot
3. introduction
4. initial suspense
5. developmental incident
6. plot incident
7. crisis
8. climax
9. simile
10. metaphor
11. hyperbole
12. tagline
13. rising action
14. falling action
15. final suspense
16. conclusion
17. theme
18. sub-plot
19. cutter
20. foreman
21. assembler
22. partsman
23. inspector
24. shipper
25. mimicry
26. character sketch.

B. Basic Academic Skills to be developed:

1. Observe character development of people in novel.
2. State plot development.
3. Compare characters behavior in novel.
4. Contrast character behaviors in novel.
5. Deduce formulations of efficient and inefficient behavior.
6. Identify main ideas in the novel.
7. Compose essays and character sketches of characters in imagined situations.
8. Decide using the decision making process with conscious awareness.

C. Careers Related to the Thematic Unit

1. Manufacturing:
    a. Foundry Worker
    b. Machinist
    c. Paper Products Worker

        d. Tool and Die Maker
        e. Iron and Steel Worker
        f. Instrument Makers
        g. Alumimum Industry Worker
        h. Executive Manager

    2. Fine Arts:

        a. Actor
        b. Actress
        c. Sculptor
        d. Playwright
        e. Novelist
        f. Artist
        g. Clergyman

    3. Communications:

        a. Reporter
        b. Make-up Artists
        c. Program Director
        d. Scenic Designer
        e. Stage Manager
        f. Announcer

IV. Student Learning Activities

A. Motivational Activities

1. Discuss different types of work as related to the novel and occupations mentioned in the novel.

2. Discuss the benefits of work to show the relationship to Silas' need for work.

3. Make a list of admired people in public and private life in order to compare and contrast these figures with characters from the novel.

4. The class will discuss various leisure time activites to determine how these activities relate to their personality development.

5. Using a list of occupations mentioned in the novel, the class will determine which ones are now extinct. Discussion will follow to determine reasons for extinction.

B. Subject Matter Learning Activities

1. Students will compose character sketches.
2. Students will write brief essays concerning the behavior of the work of the individuals on the story.
3. The students will analyze situations in the plot and the sub-plot where the actions of the characters change the directions of the plot and the sub-plot.
4. The students will imitate through exaggeration the behaviors speeches, and actions which show the attitudes of the characters. This will be done in the front of the room so that the class and the instructor can recognize the character being portrayed. Students may choose the use of video tape rather than a live presentation.
5. The students will write or tell using comparison and/or contrast of the characters in situations which show the main facet of the character they choose to interpret.
6. The students will identify literary figures of speech contained in a tape of thirty quotations from the novel.
7. The students will discuss the work and recreation habits of four of the characters of the novel to show their sympathy and understanding or contempt and disdain for the work and recreation of the characters.

C. Correlating Activities - with other subject areas

1. Manual Arts - By using volunteers or assignees set up the class members for the mass production of bird feeders on an assembly line basis. The materials necessary for one feeder are: a clean, empty quart milk carton, a wire coat hanger, two aluminum seven inch pie plates, two pocket knives, two wire

cutters, an ice pick.

The materials will be separated at the stock corner of the room designated as materials center. An individual student will receive a milk carton. This student will cut the top tent section of the carton off. He will pass the carton to another student with a knife who will cut diagonally each corner of the severed section 3/4 of an inch up from the bottom. This student will pass the milk carton to another student with an ice pick who will punch a hole in the center of the bottom square. At another aisle a student with a wire cutter will cut the bottom section of the coat hanger into an appromimately 11" rod. He will pass the remainder of the coat hangar to another student with a wire cutter who will snip off the hooked section, leaving 1/2 inch projection on each side of the bottom of the twist. The rods and the hooks will be sent to the person who will affix them properly in the assembly line. One half of the pie plates will have one hole punched in the exact center of the plate. The remaining one half of the pie plates will have a hole punched just below the lip of the rim; diametrically opposite, another hole will be punched beneath the lip of the rim. The hanger hooks will be semi-straightened by hand and an assembler will pass the semi-straightened hook thru the hole in the bottom of the milk carton. The product will then be passed to the next assembler. He will place a pie plate with a center punched hole thru the semi-straightened hook. He will pass the product to the next man in line who will reshape the hook. The product goes now to an individual with a pie plate with holes beneath the lip. The assembler will take a rod, place the product in the center of this pie plate, pass the rod thru the prepared hole, then pass the rod gently thru the carton, and cautiously thru the other hole of the pie plate. This completes the bird feeder thru the mass production process.

Each student receives one of these to take home. Undoubtedly the process will not be quietly accomplished. In a small way the student will have been exposed to division of labor, and some of the tedium of mass production.

2. Manual arts - each individual will procure at least three empty wooden thread spools. From a hardware store or any other source they will procure one candle socket with a screw type bottom. They will receive instructions as to how to assemble with glue the spools. They may then beautify by painting, carving, using decals, and being restricted only by their natural abilities, adorn the candlestick holder.
3. Guidance - Having completed the above two activities - the students will discuss their experiences in mass production and individual craftsmanship activities considering self-benefits and satisfactions involved in each activity: also considering the social implications involved in each activity. (In determining self-benefits and satisfactions the students will consider the aspects of financial reward, prestige, personal fulfillment, and future possibilities. In considering social implications, the students will regard family approval, friends' reactions, educational opportunities, and future achievements.)
4. Stage - The students, individually, before the class, will portray the function they performed in the mass production experience

of their opinion of any phase of any type of work read about in the story of Silas Marner.

5. Decision - From their experience let them state individually, in writing or orally, their preference for mass production or individual craftsmanship.

D. Individual Study Activities

1. Volunteers may visit a dairy farm, a lime stone quarry, sand pit, and a modern garage and report to the class the relevence of this visit to Silas Marner.
2. Imitate a character from the story by mimicry for the rest of the class to identify.
3. Indicate in a brief paragraph how they've discovered personal growth within their own behavior.

E. Culminating Activities

1. Have students respond to a general awareness of evaluation sheet on novel and manufacturing.
2. Transist from novel to drama by showing how Silas Marner could be produced on the stage.

VI. Bibliography and Resource Materials

Adventures in Appreciation, Silas Marner, George Eliot, Harcourt, Brace and World, Inc., 1968.

Cluster Resource Guide - Communication. Intermediate Unit #16, Lewisburg, Penna., 1973; I. U. #16.

Cluster Resource Guide - Fine Arts. Intermediate Unit #16, Lewisburg Penna., 1973; I. U. #16.

Cluster Resource Guide - Manufacturing. Intermediate Unit #16, Lewisburg, Penna., 1973; I. U. #16.

V. Evaluation

A. Evaluation of student achievement of stated objectives:
Please indicate yes (Y), no (N), or not applicable (NA) for items.
Be sure to include any pertinent explanations in comments column.

(1) Objectives (B) Behavioral Objective No.	Was it taught?	Was criterion met?	Was criterion realistic?	Is it re-usable?	Was it worth the time?	COMMENTS
1.	Y	Y	Y	Y	Y	The students developed a remarkable understanding of the phases of plot.
2.	Y	Y	Y	Y	Y	The character sketches showed remarkable insight by the students.
3.	Y	Y	Y	Y	Y	Many students saw the relationship between the characters influencing the plot and their own influence on their circumstances.
4.	Y	Y	Y	Y	Y	This was the most difficult objective. Only about 70% really developed it.
5.	Y	Y	Y	Y	Y	Only about 10% volunteered, but all enjoyed it.
6.	Y	Y	Y	Y	Y	Some chose other projects; 99% participated and enjoyed it.
7.	Y	Y	Y	Y	Y	Approximately 10% couldn't get all the materials. 98% participated. All participants enjoyed the activity.
8.	Y	Y	Y	Y	Y	This was the easiest and all of the students amazed themselves with their knowledge of
9.	Y	Y	Y	Y	Y	This discussion provided some interesting comments and good insights concerning work.
10.	Y	Y	Y	Y	Y	These discussions showed great development in the decisive making process on students' past.

C. Thematic Unit Evaluation

Give a comprehensive evaluation of the following by specifically indicating strong points, weak points and recommended changes.

(I) Objectives

(A) Goals: Quite realistic. I'd recommend no changes.

(II) Concepts: These concepts are broad enough and extremely applicable to the unit.

(III) Subject matter: Actually these twenty-six terms are a minimum; there are at least a like number more that are applicable.

1. How easily were you able to integrate the Career Education concepts into your curriculum as demonstrated by this unit?

   No trouble or problems at all.

2. What opportunities did you provide to allow input from your students, colleagues and community? What were the results of these inputs?

   I allowed students to accept my craft suggestive or use one of their own.

3. Additional comments: I spoke with my students about a TV project that some of my colleagues and I had done in conjunctive with a local industry. They were quite interested in my comments and voiced many suggestions.

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Motivational Activity #	Strong Points	Weak Points	Recommended Changes
1.	Good transitional activity from grammar and composition	At first made teacher input.	Ask students to compare composing a book to the work involved in composing a newspaper.
2.	Gives student opportunity to realize that "work" has many facets.	Several really didn't understand what "work" meant.	Stress fulfillment.
3.	Good projective took for understanding of students.	Teacher must guide to accentuate the positive.	Stress success.
4.	Promotes better understanding of the self.	Encourage tolerance.	Encourage human development techniques.
5.	Promotes awareness of changes in the field of work.	None	None

Subject Matter Learning Activity	Strong Points	Weak Points	Recommended Changes
1.	Better understanding of individual and expression.		None
2.	Better writing organizational skills.		None
3.	More aware of a persons importance to life. Improved writing skills.		None
4.	This was excellent for outgoing person	This was voluntary.	Allow an alternative writing exercise.
5.	Good techniques development.		None
6.	Good review exercise. Good discussions.		Use this as a springboard for discussion of literary techniques.
7.	Excellent discussion activity.		None

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Correlating Activity #	Strong Points	Weak Points	Recommended Changes
1.	Cooperative: great	Not 100% of students could procure materials.	Try to get more of the materials so each student have some.
2.	Novelty	Not all could get spools	Allow them to use a project craft of their own choosing.
3.	Great Discussion	None	None
4.	Affords each student an opportunity in public speaking.	Difficult for the shy.	None
5.	Affords student an opportunity to use good decisive making techniques.	None	None

Individual Study Activity #	Strong Points	Weak Points	Recommended Changes
1.	Affords an opportunity to relate.	Only 10% did this one, but they did it well.	None
2.	Affords an opportunity to show personal confidence.	Again only 15% chose this one.	None
3.	Affords an opportunity for introspection.	Most chose this one.	None

Correlating Activity #	Strong Points	Weak Points	Recommended Changes
1.	Shows individual growth.		None
2.	Helps students "see" important phases of the novel.		None

EDUCATION AND CAREER PHASES OF CAREER EDUCATION TO HEREDITY WITH EMPHASIS ON THE MANUFACTURING CLUSTER

GRADES TEN-TWELVE

INTRODUCTION:

Scientific explorations carry a burden of assumptions which bind science tightly to industrial society. The methods of scientific thinking, and particularly the techniques of forming and manipulating concepts, are clearly consonant with the methods and techniques of a rationalized industrual economy. Science and industry share casual analysis of determinate and precise relations among the parts of a process. Science has a goal of complete, efficient, and simple knowledge; industry a goal of determinate control.

The purpose of this unit is to not only produce an understanding of the science of genetics but also to expose the student to the educational background needed in order to pursue many of the career related jobs in the field of genetics. Upon completing this unit the student will be able to determine the basic characteristics and qualifications related to the preparation for and performance of the main tasks associated with the various occupational roles related to the cluster of Manufacturing.

I. Objectives

A. Goals

1. The student will trace the early history of genetics.
2. The student will have an understanding of the fundamental principles of heredity.
3. The student will understand the Gene Principle of Inheritance.
4. The student will understand and appreciate Human Heredity.
5. The student will have an understanding of the requirements necessary for becoming a Geneticist.
6. The student will be made aware of the job opportunities in genetic related fields.
7. The student will become aware of various diseases that are genetically related.
8. The student will become aware of the proper use of educational media.

B. Behavioral Objectives

1. Following an assigned reading each student will trace the early history of genetics by listing and stating Mendel's three laws of Heredity with 100% accuracy.
2. Following a lecture and blackboard examples, each student will work sample problems of the 6 types of possible crosses using the Punnett Square with 100% accuracy.
3. Following a lecture and class discussion, each student laboratory group will experiment with fruit flies to illustrate linkage, sex-determination, sex-linkage, non-disjunction and crossing over by obtaining accurate results in at least 3 of the above categories.

4. Following a lecture and class discussion on sex-linked traits, each student will produce 2 charts showing pedigrees of "Royal" families concerning color-blindness and hemophilia by carrying each chart through 6 generations with 100% accuracy.
5. Given an instruction sheet on Hospital procedure of blood typing, each student will determine his blood type and the blood type of several others with 100% accuracy.
6. After laboratory experience typing blood and class discussions concerning the inheritance of blood types, each student will prepare a chart showing the possible blood types of his offspring, assuming that he would marry each girl in the class. This should be done with 100% accuracy.
7. Following a brief class discussion of what might be available in the world of work, each laboratory group of students will survey at least 3 Career Clusters and prepare a list of jobs or job-related areas that a geneticist might be involved in, with a minimum of 10 jobs as acceptable.
8. After completing and approval of the job or job-related list, each group of students will prepare an outline containing the educational steps necessary for obtaining a B.S. degree in biology in at least three colleges offering a major emphasis on genetics.
9. Following laboratory instruction on use of tape-recorder, camera, and video-tape recorder, each laboratory group will interview and give a class presentation of different people of their choice whose occupation might be related to some aspect of genetics. The interview and presentation will be subjected to the peer group for critiquing.

10. Following a lecture and class discussions on the role of Heredity in transmitting diseases; with only a suggestion of what some lab group might like to do, one laboratory group will volunteer to present an oral presentation of at least 8 diseases involving Chromosome disorders and/or Gene defects to a health class.

II. Concepts and/or Generalizations

- A. Inheritance of one trait at a time.
- B. Law of Independent Assortment.
- C. Inheritance in Fruit Fly (Drosophila).
- D. Inheritance - chromosome principle
- E. Incomplete Dominance
- F. Multiple Alleles
- G. Human Inheritance
- H. Job Requirements in the world of work
- I. Occupations Interrelated
- J. Preparations and plans for Careers
- K. Contribution of Occupations to Society
- L. Satisfaction in Careers

III. Subject Matter

- A. Vocabulary Terms to be Defined
    1. Consultant
    2. Heredity
    3. f-1
    4. f-2
    5. p-1
    6. dominance
    7. recessive
    8. Law of Segregation
    9. Law of Independent Assorment
    10. trait
    11. chromosome
    12. gene

13. alleles
14. homozgous
15. hererozgous
16. Punnett Square
17. Phenotype
18. Genotype
19. test cross
20. hygrid
21. di-hybrid
22. tri-hybrid
23. linkage
24. sex determination
25. non-disjunction
26. crossing-over
27. imcomplete dominance
28. mutation
29. transformation
30. transduction
31. pedigree
32. RH factor
33. gamete
34. Down's Syndrome
35. Turner's disease
36. Klinefelter's disease
37. Phenylketonuria
38. Alcaptonuria
39. Albinism
40. sickle-cell anemia
41. High School
42. college
43. Graduate work
44. post-graduate work
45. apprenticeship
46. B.S. Degree

B. Basic Academic Skills

1. Written communication

2. Oral communication

3. Research techniques - written and manual

4. Group interaction in Lab Experiments

5. Group discussion

6. Awareness of Related Fields of Opportunity

7. Scientific knowledge of subject material

C. Careers Related to the Thematic Unit Grouped by Career Cluster

1. Environment

    a. Exterminator
    b. Life Scientists

    - c. Bio-Chemist

2. Manufacturing
    - a. Scientist
    - b. Consultant

3. Public Service
    - a. Education (teacher) - College and University
    - b. Marriage Counselor
    - c. Counselor
    - d. Lab Technician (Crime)

4. Health
    - a. Cytotechnologist
    - b. Blood Bank Technologist
    - c. Laboratory Assistant in Hospital

IV. Student Learning Activities

A. Initial Motivational Activity

1. By using etherizing chambers and dissecting scopes give each student 30 fruit flies and have the student categorize according to sex.

B. Subject Matter Learning Activities

1. Have students work out in class Mendel's first two laws of heredity by using the Punnett Square.
2. Have students practice probability ratios using coin toss and cards techniques.
3. Using handouts and study guide sheets have each student work out in class Mendel's 3rd Law by applying both the Punnett Square and Algebraic Method.
4. Each lab group will prepare a chart of the above 3 learning by noting the results of breeding fruit flies.
5. Using sample problems on the overhead projector, have each

student work problems related to a test cross.

6. Using fruit flies have each laboratory group demonstrate to the class living proof of such concepts as linkage, non-disjunction and crossing over by preparing transparencies of the results of their crosses.
7. Using charts and diagrams show how a blending of traits occurs in flowers.
8. Each lab group will prepare a chart or transparency tracing sex-linked traits through at least 6 generations.
9. Each student will determine his own blood type and RH factor by using a lancet and typing serums ANTI-A, ANT-B, and ANT-D.
10. A team of students (4) will interview and film several doctors to find out about the incidence of genetic related diseases, and present these interviews to the entire class.

C. Correlating Activities

1. Math Dept. - Algebraic and Probability computations
2. Guidance Dept. - Activities that require the use of college catalogues, etc.
3. Library - Activities that require extensive use of research material.
4. Health Dept. - Reports on various diseases linked to genetics.
5. English Dept. - Activities that would require students to have knowledge about conducting job-interviews and interviews in general.
6. Media course: Instructions on how to use tape recorders, 35mm cameras, and video-tape recorders.

D. Individual Student Activities

1. The student will take a fruit fly of each sex to the hospital

and have them exposed to x-ray, then cross these two by visual observation check for any abnormalities in the f_1 and f_2 generations.

2. Students will pick out two heredity traits and develop a four generation pedigree using members of his own family.

E. Culminating Activity

1. Students will present brief reports of interviews with doctors and consultants.
2. Using the Seminar type approach each lab group will present brief reports concerning possible job opportunities for a geneticist or related fields.

V. Bibliography

Cluster Resource Guide--Health. Intermediate Unit #16, Lewisburg, Pa., 1973 I. U. #16

Cluster Resource Guide--Manufacturing. Intermediate Unit #16, Lewisburg, Pa., 1973 I. U. #16

Cluster Resource Guide--Public Service. Intermediate Unit #16, Lewisburg, Pa., 1973 I. U. #16

Multi-Media

Aptitudes and Occupations., S. b/w-o/6 min. Corf 65 I. U. #16

Is Career As a Technician for You. JS Color o/5 Min. Cf 72 I.U.#16

Job Interview: Three Young Men., JS Color o/6 Min. cf 67. I.U.#16

Haskel, Sebastion and Sygoda, David. Fundamental Concepts of Modern Biology. New York: Amsco School Publications, Inc. 1972.

PA Dept. of Education. State Syllabus on Career Education. Harrisburg, Pennsylvania

Van Norman, Richard W., Experimental Biology.. Englewood Cliffs, New Jersey; Prentice-Hall, Inc. 1963.

V. Evaluation

A. Evaluation of student achievement of stated objectives:
Please indicate yes (Y), no (N), or not applicable (NA) for items.
Be sure to include any pertinent explanations in comments column.

(1) Objectives (B) Behavioral Objective No.	Was it taught?	Was criterion met?	Was criterion realistic?	Is it re-usable?	Was it worth the time?	COMMENTS
1.	Yes	Yes	Yes	Yes	Yes	
2.	Yes	Yes	Yes	Yes	Yes	
3.	No					
4.	Yes	Yes	Yes	Yes	Yes	
5.	Yes	Yes	Yes	Yes	Yes	
6	Yes	Yes	Yes	Yes	Yes	Enjoyed this activity
7.	Yes	Yes	Yes	Yes	Yes	Students saw relevancy of material
8.	No					Ran out of time
9.	No					Ran out of time
10.	No					Ran out of time

C. Thematic Unit Evaluation

Give a comprehensive evaluation of the following by specifically indicating strong points, weak points and recommended changes.

(I) Objectives

(A) Goals:

What was covered, students achieved goals.

(II) Concepts:

None (no change)

(III) Subject matter:

Continue to upgrade with new materials.

1. How easily were you able to integrate the Career Education concepts into your curriculum as demonstrated by this unit?

   Easily

2. What opportunities did you provide to allow input from your students, colleagues and community? What were the results of these inputs?

   None

3. Additional comments:

   My biggest shcok was the amount of time needed to cover this unit in this manner. I need much more time than I allowed.

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Subject Matter Learning Activity	Strong Points	Weak Points	Recommended Changes
1.	Worked Well	------------	-----------------
2.	Students like to do this	---------	------------------
3.	Review a little Algebra	More board work in math	Math review in Algebra methods of multiply in fractions
4.	--------------	--------------------	-----
5.	Worked well	Worked well	
6.			
7.			Use mimeo sheets for each student
8.	Very good activity	Very good activity	Very good activity
9.	Excellent	Excellent	None
10.			Expand this to Geisinger Medical Staff and Marriage counselors.

C. Thematic Unit Evaluation (Con't)

(IV) Student Learning Activities

Evaluate each learning activity with regard to strong points, weak points, and recommended changes.

Correlating Activity #	Strong Points	Weak Points	Recommended Changes
1.	------------------	------------------------	---------
2.	O K		
3.	Students	did well indiv	dualized
4.	O K		
5.	------------------	------------------------	---------
6.	Works Wel	Works Well	

Individual Study Activity #	Strong Points	Weak Points	Recommended Changes
2.	Students	should like	to do this

SIMILAR POLYGONS - GRADES NINE - TWELVE

INTRODUCTION:

Mindful of the growing need for integrating career information into the classroom situation, this unit on similar polygons has been prepared in conjunction with the Central Susquehanna Intermediate Unit with particular emphasis on manufacturing. Additional information has been added from other career clusters with concentration on the education and decision-making concerns as developed in the state model for career education. This unit will incorporate the traditional concepts of similar polygons with special emphasis on similar triangles of all types. It will also utilize the manipulatory skills of the students by interrelating blueprints and the production of products.

I. Objectives

A. Goals

1. Each student should be able to recognize classes of similar polygons (triangles) and polyhedrons.
2. Each student should know specific properties which would make two or more polygons (triangles) similar.
3. Each student should know specific properties which would make two or more polygons (triangles) similar.
4. Students will analyze similar polygons (triangles) and determine their related properties, formulaize these properties and justify them.
5. Students should develop a receptivity for new ideas and exploration of new ideas.
6. Students should acquire language, computational, and reasoning skills that will aid in future careers.
7. Students should understand the interelation between education and manufacturing.
8. Each student will recognize the significance of education as the primary means of achieving careers related to manufacturing.
9. Each student will acquire basic vocabulary for educational planning.
10. Each student will be able to read and draw blueprints.
11. Students should develop personal traits such as honesty, integrity, and compatibility which are socially valued and related to job success.

B. Behavioral Objectives

1. After discussion on the definition of similar polygons, each student will be able to select from a collection all those polygons that are similar to a given polygon with 80% accuracy.

efficiency.

3. Given a plane configuration of a polyhedron, each student will be able to select from a collection that polyhedron depicted by the configuration with 80% accuracy.
4. After a discussion on ratios and proportions, each student should be able to produce a blueprint, with a given scale, of a given polygon with 100% accuracy.
5. Given a blueprint, each student should be able to make a polygon with 100% efficiency using the guide lines of the blueprint.
6. Given a plane configuration of a polyhedron with a given scale, students will produce out of cardboard paper, with 100% accuracy, the related polyhedron.
7. After discussing on similar triangles, each student will list, using protractor and ruler, those parts of two given similar triangles which are the same (congruent) and will derive and prove at least three theorems that will make two triangles similar with minimum requirements and at least three theorems that illustrated the relationship of the corresponding parts of the similar triangles.
8. Having produced polygons and polyhedrons from blueprints, each student will select (by listing) those polygons and polyhedrons produced by his classmates that meet the minimum requirements established by the teacher with 80% efficiency.
9. Having studied similar polygons, each student will list at least ten occupations in which similar polygons will play a vital role.

10. Having produced a square from different polygons, the class will voluntarily relate, through informal discussion, personal traits desirable for a worker and for job success in manufacturing. A minimum of 75% of the class will identify one trait.

11. Having developed a list of 10 occupations related to similar polygons, each student will list 5 educational experiences he believes to be important in entering and advancing in a particular occupation he has selected from the list.

II. Concepts and/or Generalizations

1. Students today must be aware of ratios and proportions in order to achieve mathematical maturity.
2. Knowledge of similar polygons is a necessity for an individual to fully understand his surroundings.
3. Knowledge of blueprints and their production give students a good understanding of ratios, proportions, and similar polygons.
4. Awareness of the process of manufacturing makes an individual appreciate his surroundings.
5. The ability of a student to analyze and generalize effectively is a necessity for him to advance in society.
6. Occupation oriented vocabulary enables an individual to advance in a particular occupation of his choice.
7. Students must be aware of attitudes and environments, that would promote productivity in the industrial world.

III. Subject Matter

A. Vocabulary terms to be Defined:

1. ratio
2. proportion
3. means
4. extremes
5. similar
6. corresponding parts
7. altitudes
8. median
9. area
10. scale
11. manufacturing
12. apprentice
13. training
14. industry

B. Basic academic skills to be developed:

1. Students will identify equivalent ratios.

2. Students will solve for unknown terms in proportions.

3. Students will be able to compute with irrational numbers.

4. Students will formulate theorems and defend them.

C. Careers related to the Thematic Unit grouped by Career Clusters:

1. Manufacturing
    a. draftsman
    b. tool and die personnel
    c. quality control personnel

2. Construction
    a. architect
    b. carpenter
    c. brickmason
    d. surveyer (civil engineer)

3. Fine Arts and Humanities
    a. photography

4. Transportation
    a. cartographer

IV. Student Learning Activities
A. Motivational Activities

1. Film: "Learning to Earn"

2. Draw a picture of the Washington Monument
3. Students will identify given shapes
4. Film: Ratios and Proportions in Mathematics.
5. Posters: Careers in Geometry

B. Subject Matter Learning Activities

1. Students will reduce given fractions to lowest terms.
2. Students will solve for unknown terms of proportions.
3. Students will write new proportions from existing proportions.
4. Students will discover and compute with irrational numbers.
5. Students will find the measures of the essential parts of polygons and polyhedrons having been given a similar polygon and/or polyhedron with all the measures known and the scale.
6. Students will analyze similar polygons (triangles) and determining their related properties, formulaize these properties and justify them by proof.
7. Transparenciens: Similar Triangles I & II.
8. Given a blueprint, a student will produce a polygon and/or a polyhedron using the blueprint as the guide.
9. After a discussion on ratios and proportions, each student will produce a blueprint with a given scale of a given polygon.
10. Transparencies: Mechanical Drawing - Scale Drawing I & II.
11. Given a plane configuration of a polyhedron, each student will select from a collection that polyhedron depicted by the configuration.
12. Students will analyze similar polygons and determine their related properties, formulaize these properties and justify them by proof.
13. Having produced polygons and/or polyhedrons from blueprints

each student will peruse his fellow classmates' polygons and/or polyhedron and decide which meet established minimum requirements by listing those acceptable.

14. Having produced polygons from blueprints, the class will manufacture squares from the polygons and discuss those personal qualities which make for good production.

C. Correlating Activities

1. Having discussed properties of similar polygons, the students will discuss different curriculums in which they have a vital role, eg. art, drafting, industrial arts, etc.
2. Having discussed ratios and proportions, students will examine relief maps of area and determine ratios of heights described by teacher.
3. Having discussed ratios and proportions, students will examine road maps with given ratios. Then each student will make a road map of their neighborhood.

D. Individual Study Activities

1. Having shown signs of difficulty in learning the fundamental concepts, the student should refer to Dolciani's Programmed Practice in Geometry.
2. Having digested the information on similar polygons with ease, (a) the student should refer to Coxford's Geometry - a Transformation Approach for applications to similarity for additional material.
   (b) find the relation of areas of similar polygons and polyhedrons.
   (c) find the relation of volumn of similar polyhedrons.

E. Culminating Activities

1. Having studied and produced similar polygons, students will list at least 10 occupations involving similar polygons, of

which five must be found in the immediate area.

2. Having developed a list of occupations involving similar polygons, each student can select one occupation from the list and prepare a collection of skills and competencies needed to enter the selected occupations.
3. Having developed a list of occupations related to similar polygons, each student will develop a list of 10 personal educational experiences which he has had in the past and discuss their relationship to one of the occupations selected from the list.
4. Given different occupations of which knowledge of similar polygons is an integrate part, the student can list the educational experiences each believes to be important in entering and advancing in the particular occupations.
5. Having produced polygons from blueprints and checked them for minimum requirements, students will see the video-tape on Berwick Forge and Fabricating.
6. Having selected an occupation from a self-produced list of occupations related to similar polygons, each student will list in order, the education experiences (courses and training) he will need to enter and advance in that occupation.

VI. Bibliography

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Jurgensen, R.C. Programmed Practice; Modern School Mathematics - Geometry, Houghton Mifflin Co., 1969

Multi-Media

Geometry on Occupations, Fessender, W.P., J. Weston Watch Co. 1968

Forge and Fabricating Video-Tape. Berwick High School, Berwick, Pa. 1974. 20 Min; I.U.#16

Learning to Earn. A61, Color, 10 Min., I.U. #16.

Mechanical Drawing - Scale Drawing I and II. I.U. #16

OFFICE CAREER
GRADE TWELVE

INTRODUCTION:

This is a new unit on how to efficiently operate an office through a simulated typical manufacturing business office. A company will be set up which will be manned by students in Business Education--Office Practice Class in 12th Grade. Students will be briefed on typed of business in advance of actually performing the duties. Stress will be placed on how to operate an office which includes manufacturing and distributing a product or products.

Speakers from throughout the business community will be brought in to brief students on various jobs covered by the unit. This, likewise, will be done before the various jobs are performed.

The focus of this unit will be placed on business and office cluster with a supplementary emphasis on manufacturing.

As a result of this unit it is hoped that students will further their development in career and self, which are two concerns of the Pennsylvania Career Development Education Syllabus.

Students will relate to the world of work, especially business careers, and really appreciate how an office is meant to be operated.

I. OBJECTIVES:

A. Goals

1. To maintain and further develop knowledges and skills relating to the business cluster.
2. To acquaint the students with various jobs involved in efficiently operating a profitable business.
3. To demonstrate accuracy of operating adding machines in a business office.
4. To set forth desirable standards of office appearance.
5. To increase all students' knowledge of existing equipment and supplies available for offices.
6. To assist students in their selection of careers with regard to practical experiences.
7. To teach honesty, loyalty and courtesy for every day living and success in the business world.
8. To offer experiences in as practical a situation as possible in the performance of routine office jobs as proved in the business and manufacturing clusters.

B. Behavioral Objectives

1. All students will perform their job assignment of typing at 60 words a minute with one word allowed in error per minute.
2. After description or presentation by the teacher of accounting, secretarial and general office careers, including levels of responsibility, all students will be given a matching test and will recall job titles and functions with 85% accuracy.
3. After finding out what competency a student has on an adding machine and given a practice session each will increase his skills by one level which is a demonstration of 98% accuracy.

4. After instruction concerning right and wrong appearance in an office all students will dress daily according to proper standards for each class session as visualized by the teacher.
5. From prior knowledge all students will list and write a statement concerning reasons for their choice of usable and available equipment for a business office.
6. Each student will evaluate all types of jobs involved in this project and chose one of their liking as measured by at least one written career brief. Accuracy of briefs will be determined by teacher opinion.
7. From prior experience 10 students will define orally at least one attitude and one social behavior necessary for a successful worker in an office.
8. All students will feel the atmosphere of a business office during their entire experience of this unit as measured by evidence of students smiling, working, and approved noise.
9. Given an opportunity students will actively participate in simulated company office model as measured by teacher observation.
10. All students will transcribe during their job assignment with at least 80 words a minute with 2% error allowed.

II. Concepts and/or Generalizations

A. Many careers in the business office require various skills, knowledge and attitudes.

B. In many positions in the office there are many levels of responsibility.

C. Some people are suited for only one or two jobs. Others can do all jobs required in an office.

D. Each job in an office requires some special preparation.

E. Experience in actually doing the job facilitates career decision-making.

F. Students must be familiar with company policies, rules and regulations and procedures.

III. Subject Matter

A. Vocabulary Terms to be defined

1. simulation
2. interaction
3. errors
4. independent
5. roles
6. application
7. W-4 form
8. behavior
9. rewards
10. bonus
11. shipping
12. freight
13. memorandums
14. invoices
15. posting
16. cash receipts journal
17. cash payments journal
18. payroll
19. suppliers
20. checks
21. bank deposits
22. withdrawals
23. bank statement
24. cooperation
25. judgment

B. Basic Academic Skills to be developed.

1. Dictation
2. Typing
3. Office Machines Operation
4. Accounting Procedures

C. Careers Related to the Thematic Unit Grouped by Career Clusters

1. Business and Office
    a. Stenographer
    b. Accounts Payable Clerk
    c. Receptionist

- d. Billing Clerk
- e. Accounts Receivable Clerk
- f. Typist
- g. Office Manager
- h. Cashier
- i. Warehouse man
- j. Payroll Clerk

2. Manufacturing

   - a. Manufacturing Manager
   - b. Stock Control
   - c. Quality Control

3. Marketing and Distribution

   - a. Shipping Clerk
   - b. Buyer
   - c. Traffic Controller
   - d. Advertising and Promotion Consultant
   - e. Sales Representative

IV. Student Learning Activities

A. Motivational Activities

1. This unit will be announced about three weeks before actual work begins. Teacher will announce that something new will be starting and all will have an opportunity to work in an actual office situation. Students will realize that promotional possibilities are unlimited.
2. Transparencies will be shown students before beginning entire project. These include Courtesy on the Job (A & B), Responsibility on a Job, Taking Criticism on a Job, Beginning Late to Work. It will be pointed out after viewing these transparencies that we will operate an efficient office - the type management enjoys owning.

B. Subject Matter Learning Activities

OFFICE PRACTICE -- A SIMULATION OF TYPICAL MANUFACTURING BUSINESS OFFICE

1. This corporation distributes and manufactures goods in the institutional equipment and supplies business. Efforts have been concentrated in this unit on the office phases of the business.
    a. Work done by each student must be properly prepared before passing it along to the next department. Students will check each other. There is a manager for each department who reports problems to a General Manager, who in turn reports to a president of the company, i. e. the teacher.
    b. Students are paid a base rate but can receive bonuses for outstanding work. This is also true of all managers, including General Manager.
2. Each student does only part of the office work, then passes

it on to another to complete the work. If a mistake is made, it has to be found by the next department. Each student works independently of others. Periodically, students change jobs and learn another phase of the business.

3. Using education as the basic background, the student is now allowed to try himself out in various jobs and thus indicate to himself just what he enjoys doing in an office. This decision-making activity should prove to be most beneficial to all concerned.
4. Each student is given an employees guide which contains all the information needed to perform a variety of roles in the office. Job application forms are filled out by each student along with government withholding forms
5. This corporation office consists of four main departments - Sales, Accounting, Warehouse, and Traffic - all under the supervision of a general manager. An outside organization represents all the customers and suppliers of our Corporation and serves as its bank.
    a. The Sales Department receives orders when they come into the office. The employees in this department edit the orders, prepare shipping orders and freight memorandums, and invoices, and post the amounts owed to the customer account. When the customer's checks are received, the employees post the receipts to the cash receipts journal and the customer's account and then deposit the cash receipts in the bank.

b. The Accounting Department receives suppliers' invoices, employees check the invoices for accuracy and post the amounts owed to the suppliers account. When payment is due, employees prepare the checks for the amount owed to the suppliers and post to the cash journal and the suppliers account.

c. The Warehouse Department keeps a perpetual inventory of all merchandise in and out of the plant. When goods are received they add to the previous inventory card figure. When goods are removed the amount is deducted from the previous figure.

d. The Traffic Department handles all costs of shipping goods in and out of our plant. They figure freight for all distances the goods are hauled.

e. In the cash Control System the bank deposits and withdrawals are maintained by the bank. They send a bank statement periodically. When the bank statement is received it is reconciled to make certain that the cash records agree with the bank record.

6. There are about 200 orders forms from customers. Each day the teacher feeds six orders into the system to be processed.

7. A weekly report, similar to a time card, is filled out by each employee every week. A grade in this type project depends on the starting salary (set by the managers) and the general behavior towards the work which is rewarded by a bonus.

8. Top-level students will begin with managerial duties to get off on a good start. Gradually they will be transferred to all other jobs in the office. Their wages will be paid accordingly

by job or duty. This will give those of higher achievement level an opportunity to better understand all types of jobs regardless of their handle. Low-level students will start on the bottom rung of the ladder of progress and if they prove efficient will be promoted to a higher up job. It is possible for a low-level student to work himself into the general manager post.

9. The accounting procedures will be simple debit and credit bookkeeping, also involved will be keeping perpetual inventories of goods on hand and an "order more" point will be kept under surveillance by the person in charge.
10. Equipment to be used will be all IBM Selectric typewriters, ten key adding machines, full keyboard adding machines, electronic calculators and transcribing units.

C. Individual Study activities

1. Approximately three weeks before beginning this project each student is assigned a job with the organization. Instructions are available for each assignment and students will study their particular job and also the overall office situations.

D. Culminating Activities

1. All students will balance their records in various departments and a check for efficiency and accuracy is made by the teacher who has a key to the completed unit. Errors will be pointed out by the teacher and students will be asked to make corrections.
2. Students will personally arrange for the appearance of a school photographer who takes pictures of our model office in operation for the school newspaper and school yearbook. The local press will also be contacted. An extensive article

will be written by a volunteer group of students for the local newspaper.

IV. Bibliography and Resource Materials

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INTRODUCTION:

The following Career Education curriculum unit was developed to be used during 3-one-week in-service training sessions for K-12 educators (teachers, counselors, administrators, and para-professionals). This training was designed to be supplemented with supportive services during local implementation efforts of developed curriculum.

This unit emphasizes the Pennsylvania Career Development Model and the USOE cluster concept. It was field tested in 1973-74 with 3 participating districts.

Note: A shorter modified version of the 3-week plan may be accomplished by use of starred (*) items within a 3-day period.

I. Objectives:

A. Goals

*1. To improve participant's scope of career education concepts.

*2. To increase participants' committment to career education.

3. To produce classroom usable media.

*4. To increase participants' career education strategies and techniques.

5. To develop career education curriculum units.

B. Behavior Objectives (Code=Goal)

1. Given opportunity to interact and participate in activities, functional systematic change agent personnel will develop as measured by observed cooperation and planning. (G 1)

2. Following instruction in media techniques of 8mm, 35mm, and video-taping, each team will produce at least 3 units of classroom usable media. (G 3)

3. After filming in actual work situations, participants will acknowledge the importance of community involvement as a classroom resource as recorded on subjective evaluations. (G 1 4)

4. Given instruction in writing behavioral objectives in the Mager format, provided relevant examples of behavioral objectives from each domain of behavior, and having read materials on the domains and levels of behavior, each workshop participant will (a) demonstrate competency in writing behavioral objectives by preparing three original objectives in the Mager format for any level of each of the domains of behavior, and (b) demonstrate competency in using the levels of the domains by writing an original behavioral objective in the Mager format for the third level of each of the domains of behavior. (G 5)

5. Provided instructions on curriculum theory, shown relevant examples of curriculum units, and given a standardized format for the CSIU curriculum units titled Thematic Resources and Activities for Career Education (TRACE), each workshop participant will demonstrate his/her ability in curriculum development by preparing an original curriculum unit that contains, as a minimum, all of the components listed in the standard format and is suitable for implementation in their classroom (or in a classroom within their school). (G 1 5)

6. Following sessions dealing with the career concept, the career cluster concept, and other concepts related to career education, and given the state of Pennsylvania career development education model (K-12), each workshop participant will: Choose a minimum of two of the "concerns" in the state career development model to concentrate on and develop objectives, student learning activities, and evaluative procedures for use in their TRACE, and develop as a minimum one each of the following: (1) Behavioral objectives, (2) Concept or generalization, and (3) Student learning activity for the learning domains of vocabulary, cognitive, affective, and psychomotor. (G 1 5)

7. During the course of the workshop week devoted to career education curriculum development, each workshop participant will display an interest in career education and demonstrate the social values of responsibility, honesty, and cooperation by volunteering his expertise in developing curricular materials, completing the competencies requested, and assisting in team-oriented efforts. (G 1 2 3 4 5)

8. After HDP training, participants will exhibit mastery of elementary techniques and concepts as measured by satisfactory demonstration

of leadership within a magic circle. (G 4)

9. After value clarification activities, participants will assimilate new strategies for dealing with other faculty members as evidenced by inclusion of such techniques in future plans. (G 4)

10. After training experiences, each participant will make verbal commitment of their personal and team plans for career education implementation in local district as recorded by CEI staff. (G 2)

11. During the workshop, each participant will participate in at least one activity, designed for student use in each of the 6 concerns, as measured by staff observation and completed activity idea sheets. (G 4)

12. After workshop training, participants will increase their orientation toward change and improve their knowledge of career education as measured by gain scores of CETCA. (G 1)

II. Concepts and/or Generalizations:

1. Career Development occurs according to Pennsylvania Career Development Model.
2. Experiencing of activities facilitates implementation of Career Education in classrooms.
3. Career education is for all pupils.
4. In-servicing produces implementation of Career Education.
6. Curriculum planning unifies Career education activities.

III. Subject Matter:

A. Vocabulary terms:

1. career education
2. cluster (15)
3. learning station
4. awareness
5. exploration
6. preparation
7. HDP

8. domains
9. concerns
10. TRACE

B. Basic Academic Skills to be Developed.

1. Applications to all subject matter will be emphasized.

C. Careers Related to the Thematic Unit grouped by Cluster.

1. All 15 clusters will be covered.

IV. Student Learning Activities: (Code=Concern/B.O.

A. Motivational Activities

Phase One

* 1. Sharing of career education films. (8 12 6 12)

* 2. Introduction activity of first names in accumulative manner (B 9)

3. In-service credit explainations.

B. Subject Matter Learning Activities:

* 1. Dyad introduction activity. (B 4 8)

* 2. Concensus building exercise (Characteristics of a good teacher.) (B 8 11)

* 3. Demonstrated,lesson of Career Insights and Self-Awareness. (Decision-making) (B 11)

* 4. Presentation of Career Education Theory (B 6 12)

* 5. Presentation of Pennsylvania Career Development Model and Guide (B 6)

6. 3-day HDP training (Self) (B 9 11)

* 7. DUSO demonstrated lesson. (Self) (B 11)

* 8. Playing "Market" simulation game. (Economics) (B 11)

9. Making of personal coat of arms for Deciding course. (Decision-making) (B 11)

Phase Two

* 1. Dyad introduction activity. (b 4 8)

10. 2-day media instructional session consisting of learning stations or 8mm and 35mm career techniques, video-tape production, editing, transparency production, audio techniques as usable by students and teachers in educational situations. (B 2)

11. Filming (by selected media) actual work situation by each team with emphasis on the workers not the process. (B 3)

12. Viewing of produced media with peer critiquing of content and technique (B 4)

13. Sharing of off-chute learning occurring by visit to industry. (B 4)

14. Demonstrated career educational advisory committee meeting. (B 3)

15. Reading of community advisory handout. (B 3)

* 16. Presentation of clustering concept (B 12)

* 17. Playing of music and categorizing of related careers by clusters (Career) (B 11)

* 18. Participants using of CSIU 16 Career information service request card (Career) (B 11)

* 19. Search for specified educational levels of jobs in commercial brief files (Education) (B 11)

20. Playing of Life Career Game (B 11)

21. Demonstration lesson of Chronicle Guidance PWAK (Careers) (B 11)

* 22. Completion of activity idea sheet. (B 11)

* 23. Interview of workers for leisure time activity (Leisure) (B 11)

24. Use of Environmental Learning Station (B 11)

* 25. Tour of resource center on display of Career Education materials. (B 11)

Phase Three

- * 26. Presentation of curriculum theory. (B 5)
- 27. Reading of Mager's Preparing Instructional Objectives, and/or Bernabei and Lales Worksheets. (B 4)
- 28. Writing of original behavioral objectives (B 4)
- 29. Reading of handout of domains of behavior. (B 4)
- 30. Presentation of TRACE outline and examples. (B 5)

C. Correlating Activities

1. Implementation of ideas in classrooms.

D. Individual Study Activites

1. Personal tutoring by staff as needed.
2. Critiquing and rewriting of TRACES.
3. Reading of Hoyt's "Career Education What It Is and How to Do It."
4. Homework of assigned readings.

E. Culminating Activity

1. Writing of TRACE units by participants.

V. Evaluation

A. Evaluation of student achievement of stated objectives.

1. Observation of participant interaction behavior.
2. Presence of prepared media, TRACES, plan of action for future use.
3. Subjective evaluations.
4. Written Behavioral Objectives.
5. HDP - leadership observation.
6. Completion of idea sheet.
7. Pre and Post Test of CETCA.
8. TRACE Standardized Evaluation Form.

Bibliography:

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Domains of Behavioral Handout - Central Susquehanna Intermediate Unit #16 - Box 213 - Lewisburg, Pennsylvania. 17837

Hoyt, Kenneth - Evans, Rupert - Machin, Edward - Magnun, Garth - "Career Education - What It Is and How to Do It." Olympus Publishing Co., Inc. 995 East 9th Street South - Salt Lake City, Utah. 84105 - 1972. Available at most libraries, including Central Susquehanna Intermediate Unit.

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Pennsylvania Career Educational Development Guide - Pennsylvania Dept of Education, Harrisburg, Pennsylvania. 1974.

TRACE Outline - Available at Central Susquehanna Intermediate Unit #16 - Box 213 - Lewisburg, Penna. 17847

Media:

Duso D-1 and Duso D-2. Don Dinkmeyer. DePaul University. Published by American Guidance. Publisher's Building, Circle Pines, Mn. 55014,1973.

Deciding. Publications Order Office. College Entrance Examination Board. Box 592. Princeton, New Jersey 08540.

Environment Learning Station - Available at the Central Susquehanna Intermediate Unit - Box 213 - Lewisburg, Pennsylvania 17837.

Life Career Game. Western Publishing, Inc., Whitman Hobby Division Department M. 1220 Mount Avenue. Racine, Wisconsin. 53404.

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WORK (Widening Occupational Roles Kit.) Science Research Associates. Inc., 259 East Erie Street, Chicago, Illinois 60611, 1962. 1967.

INTRODUCTION:

The units in this section were developed by paraprofessionals In the Career Education Institute. It is the philosophy that this role can provide a special service to a Career Education Program. This is evidenced by the units developed and implemented on the following pages.

A SIMULATION

Description of Activity

A simulation for primary level (easily adapted to the intermediate level) involving a small model community depicting various buildings will be used to match: (1) people who work in those buildings; (2) equipment involved in those occupations; and (3) a role-playing activity involving those occupations.

Concepts

Becoming aware of the various occupations within the community and interdependence of community workers, the various equipment involved in those occupations, and ideas about what these occupations entail.

Materials

1.-Small model community on a large board depicting various buildings which will be labeled. 2.-Cards with pictures of "workers" which will match the buildings. Cards will be labeled on the reverse side with the name of the building. 3.-Cards with pictures of "equipment" pertaining to the occupations involved in the buildings. Cards will be labeled on the reverse side with the name of the building. 4.-Name tags depicting the different types of occupations. 5. -Cluster envelopes would contain material about each occupation (grouped according to cluster.)

Procedures for Use

1. Matching people - each student would be asked to match the card with the "worker" to the correct building. This could be a group activity or an individual project for one student. The name of the building would be listed on the reverse side of the card to check the matching.
2. Matching equipment - each student would be asked to match the card with the "equipment" to the correct building. This could be a group activity or an individual project for one student. The name of the building would be listed on the reverse side of the card to check the matching.
3. Role playing - a. Each student would be given a name-tag with an occupation and would be asked to interpret some of his feelings regarding that occupation. b. Pick one building and have a role-playing situation involving that building; i.e., supermarket (for Marketing-Distribution cluster).
4. Have a class discussion where each child tells about the place(s) where his family works. Ask if that "place" is listed on the map. Categorize the parents' occupations into: goods or services; or career clusters.
5. Have a discussion on the interdependence of the community. What if the community were larger? smaller? How would that affect the community; i.e., number of gas stations?

There would be no winners using these activities.

Questions to ask following the play of activities:

Activity 1

1. Ask students to list buildings not presented on the map.
2. Classify occupations according to: goods and services or career clusters.
3. Ask students to list occupations not presented.

Activity 2

1. Ask students to list other kinds of equipment not listed that might be used in these buildings.
2. Students could bring in objects and identify their use in the building.

Other Activities

1. Take a field trip to one of the buildings on the map to really explore it and the people inside.
2. Prepare role folders for the occupations via interview, encyclopedia, etc.
3. Have students make a map of the school building.
4. Relate the occupations involved in this community to the nearest clusters. (For intermediate level).

COMMUNITY MODEL

Overview

The map of Millville is a layout of different industries and occupations for students to use in role playing, map reading, and identifying with the cards that have pictures of and a short description of occupations. Grade level: K-6.

Concepts

Occupations in a small community.
Volunteer Services.
Interdependence of occupations in a small community in comparison to interdependence in a larger community.
Why doesn't a small community have all gas stations?
What is the occupational difference in a small versus a large community?

Materials

Map - locations marked.
Cards - Pictures of people in job situations and buildings housing occupations.
Name tags - for title of different occupations -- such as - post master, policeman, etc.

Procedure

Using board with a group.
Activity I - Using board to learn map reading, location of different industries.
Activity II - Using cards with pictures and description on back of card. (individual or group.)
Activity III. Role playing - Have students demonstrate or tell about different types of occupations.
Activity IV - Discuss occupations of parents.
Activity V - Use career clusters - Put occupations into certain cluster.

Discussion

Question students.
Activity I - (a) What products are produced in their community?
(b) What items are sold in stores?
(c) How are products used?
Activity II - Have students discuss parents occupations. (Is it a goods or service?)

Related Activities

Field trips
Films of industry
Guest speakers
Role playing - Have children select one occupation and act out or talk about it.

Adapting to Grade Level

K-6 -- Show films
Cut pictures from magazines.
Role-play.
4-5-6-- Collect information on different industry.
Use career clusters to show how many different types of occupations can be listed under one cluster.
Role-playing-more depth in role playing.

USING RESOURCES WITH GROUPS.

I. Overview

A. By using material available through C.S.I.U. (Comic books, film strips, and discussion of clusters) the grade levels 7 through 12, can be made aware of career choices. The introduction of local classified ads, job applications, and games or simulations of job interviews, should give them a realistic idea of what they will be encountering.

II. Concept

A. To make students aware of the vast choice of careers, and try to help them pinpoint their areas of interest.

B. To actually expose them to a job application, and simulation of an interview.

III. Components

A. Cluster Comic Books

B. Film Strips

C. Local Classified ads.

D. Urban classified ads.

E. Actual job applications from local business places

F. Completed job applications (for checking)

IV. Procedure

A. Using a small group of students, I would initiate a discussion of careers, probably starting with a question, "Do any of you have part time jobs?" (paper boy, gas station attendant, over the counter sales; depending upon the age group)

B. Lead them on to thinking about things they might like to do, ultimately ascertaining a preference of each student. Align these preferences individually with a cluster. (Could be more than one.)

C. Obtain cluster comics of related clusters they have chosen, and give them time to read. Ask them to try to picture themselves in more than one role described in the comic. (As the comic does inform them whether or not they will need a college education, a brief note should be made for them to note this.)

D. Order film strips relating to preferences of students (same group) - and show them. 4-5 strips should be able to be shown in a 45 minute period.

E. Bring in local classified ads for perusal and discussion. Grades 11 and 12 might be interested in looking over some city classifieds.

F. Provide job applications for individuals as close to career cluster they've chosen as possible. (These various applications will be duplicated at school.) Ask the students to fill these out and help them as needed. (A sample of each will be provided.)

V. Discussion

A. "Do you feel that actually getting some clear-cut ideas about these various jobs might help you make a career decision in the future?"

IV. A. Game and simulation (Job interview)

1. Ask for volunteer to act as interviewer. (Will have list of questions to ask.)
2. Ask for 3 students for panel for evaluating responses of applicants. (Will have cards stating prerequisites.)
3. Remaining students will assume the role of applicants.

GOAL: Panel will decide who best answered questions and gets the job and wins the game.

B. Game - "Listen to the Music"

1. Choose a popular record and play on recorder in classroom.
2. Now, instruct them to listen again and pay particular attention to the lyrics of the song.
3. Ask them to associate individual words and phrases with occupations that they might be familiar with, and list them on paper. You will

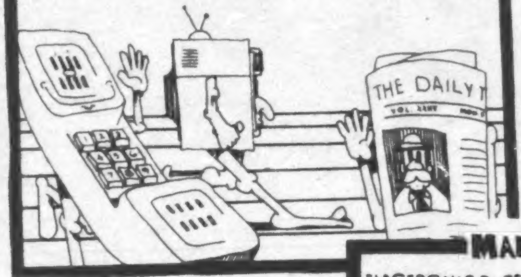
probably have more success if you cite some examples first.

4. Play record three times in all.

GOAL: Discover existing awareness of job opportunities.

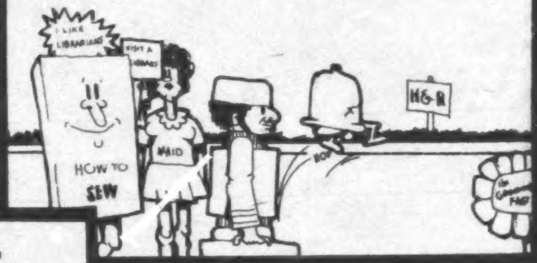
COMMUNICATIONS AND MEDIA

NEWSCASTERS, PHOTOGRAPHERS, ARTISTS (COMMERCIAL), EDITORS, OPERATORS, CAMERA TECHNICIANS, LINEMEN, WRITERS.



HOSPITALITY and RECREATION

COOKS, MAIDS, WAITERS, WAITRESSES, HOTEL & MOTEL MANAGERS, DESK CLERKS, BELL HOPS, PARK RANGERS, THEATER OPERATORS, LIBRARIANS.


I LIKE LIBRARIANS
VISIT A LIBRARY
HOW TO SEW
MAID
HG-R

MANUFACTURING

ELECTRONICS TECHNICIANS, DRAFTSMEN, ENGINEERS, SCIENTISTS, JOURNEYMEN, ASSEMBLY LINE WORKERS.

TECH
IN A MICRO-SCOPE
FACTORY

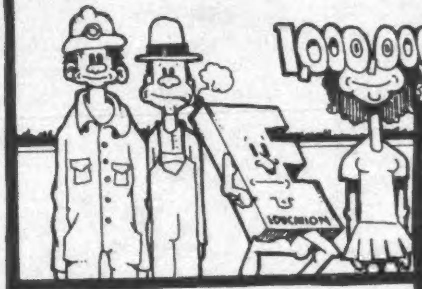
MARINE SCIENCE

OCEANOGRAPHERS, FISHERMEN, LABORERS, BOAT HANDLERS, DIVERS, LAB TECHNICIANS, SCIENTISTS, DOCK HANDS,

MR FISH
MRS FISH

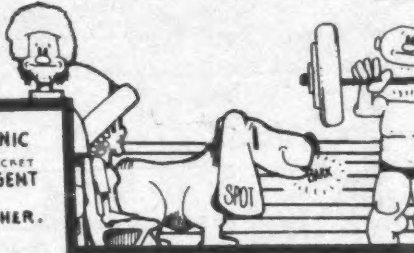
AGRI-BUSINESS / NATURAL RESOURCES

LUMBERMEN, MINERS, FARMERS, FORESTERS, ENGINEERS, GEOLOGISTS.


1,000,000
LAND OF AGRI-BUSINESS N.R.
EDUCATION

PERSONAL SERVICE

PHYSICAL CULTURISTS, BARBERS, COSMETOLOGISTS, FUNERAL DIRECTORS, KENNEL OPERATORS, EXERCISE SPECIALISTS.



PUBLIC SERVICE

TEACHERS, CITY OFFICIALS, POLICE, FIREMEN, SERVICEMEN (ARMY, NAVY, AIR FORCE, MARINES) POSTAL EMPLOYEES, HIGHWAY EMPLOYEES

U.S MAIL
ROAD CONSTRUCTION IS MY GAME
FIRE
PS
POLICE
54

TRANSPORTATION

PILOT, BUS DRIVER, STEWARDESS, MECHANIC SHIP CAPTAIN, TAXI DRIVER, TRUCKER, TICKET AGENT BAGGAGE CLERK, ENGINEER, DISPATCHER.

TICKET
ROW / SEATS
SHIP

Career Education Service
Central Susquehanna Intermediate Unit
Box 213, Lewisburg, Penna. 17837